EXHIBIT 45

REDACTED VERSION OF DOCUMENT
SOUGHT TO BE SEALED

United States District Court

Northern District of California

Case No. 5:15-md-02624-RMW

IN RE: LENOVO ADWARE LITIGATION

<u>REDACTED</u>

Expert Declaration of Bruce McFarlane

July 22, 2016

TABLE OF CONTENTS

1. INTRODUCTION[1]

1.   Plaintiffs' and Class members' ("Class Plaintiffs") are individual purchasers of Lenovo personal computing ("PC") laptops preloaded with a hidden spyware program, VisualDiscovery, designed by Superfish.

2.   VisualDiscovery functioned by injecting code onto any browser pre-installed or thereafter installed by the Affected Lenovo laptop user to intercept data sent between a computer user and a website, redirecting it for analysis to generate relevant advertisements, and then transmitting those advertisements back to the user's computer where they would be injected into the web browser.[2] Lenovo agreed to install VisualDiscovery on its consumer laptop computers in exchange for an upfront fee from Superfish and 25 percent of the future advertising revenue Superfish would earn by running the program.[3] Lenovo did not disclose to consumers that it was installing VisualDiscovery on these computers and VisualDiscovery was buried deep within the operating system to avoid detection by anti-malware programs.[4]

---

[1] In this section I set forth my understanding of the background of the case and Class Plaintiffs' allegations based on the consolidated class action complaint filed in this matter, my review of internal Lenovo internal documents, published materials, and information reflected in reports and materials provided by and in discussions with counsel. Specific materials that I have reviewed and analyzed appear in the footnoted text of this report.

[2] Consolidated Class Action Complaint, ¶2; SF_MDL_006021-027 ▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮ LEN-0018155-159 ▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮ LEN-0035573 ▮▮▮▮▮▮▮▮▮▮▮▮); SF_MDL_013358-361 (

[3] Consolidated Class Action Complaint, ¶2; SF_MDL_010342-361 at '355 ▮▮▮▮▮▮

[4] Consolidated Class Action Complaint, ¶3; LEN-0034956 (▮▮▮▮▮▮▮▮▮ ; LEN-0043777 (▮▮▮▮▮▮▮▮ ; LEN-0050126 ▮▮▮▮▮▮▮▮ ; SF_MDL_000243 ▮▮▮▮▮▮▮ see also Declaration of Dr. Aviel D. Rubin ("Rubin Decl."), ¶ 29.

2

3.	Around August 2014, Lenovo began shipping laptop computers to consumers in the United States with VisualDiscovery pre-installed.[5] The computer models on which Lenovo installed VisualDiscovery include the following:

**Figure 1:	Lenovo Computer Models on Which VisualDiscovery was Installed ("Affected PCs")[6]**

G Series:	G410, G510, G710, G40-70, G50-70, G40-30, G50-30, G40-45, G50-45
U Series:	U330P, U430P, U330Touch, U430Touch, U530Touch
Y Series:	Y430P, Y40-70, Y50-70
Z Series:	Z40-75, Z50-75, Z40-70, Z50-70
S Series:	S310, S410, S40-70, S415, S415Touch, S20-30, S20-30Touch
Flex Series:	Flex2 14D, Flex2 15D, Flex2 14, Flex2 15, Flex2 14(BTM), Flex2 15(BTM), Flex 10
MIIX Series:	MIIX2-8, MIIX2-10, MIIX2-11

4.	Lenovo sold approximately 800,000 computers in the United States that included VisualDiscovery.[7]

5.	VisualDiscovery had a materially negative impact on the Lenovo laptops which it was installed. From a performance perspective, the program increased CPU usage, which decreased both the amount of time an Affected PC could operate between charges and the lifespan of the battery.[8] In addition, VisualDiscovery slowed the laptop's internet connections,

---

[5]	Consolidated Class Action Complaint, ¶80; Simon Phipps, *Lenovo: "We Were as Surprised as You"*, February 20, 2015, InfoWorld, http://www.infoworld.com/article/2886959/laptop-computers/are-you-buying-risk-along-with-yourlaptop.html, accessed September 29, 2015; Lenovo Responses to Plaintiffs' First Set of Interrogatories, Response No. 3 (███████████████; LEN-0114815 █████████ SF_MDL_013160-172 █████████████████████████████

[6]	Consolidated Class Action Complaint, ¶81; LEN-0114815 (███████████████████ █████████

[7]	Consolidated Class Action Complaint, ¶1; Simon Phipps, *Lenovo: "We Were as Surprised as You"*, February 20, 2015, InfoWorld, http://www.infoworld.com/article/2886959/laptop-computers/are-you-buying-risk-along-with-yourlaptop.html, accessed September 29, 2015; Lenovo Responses to Plaintiffs' First Set of Interrogatories, Response No. 3 (████████████████); LEN-0114815 ████).

[8]	Consolidated Class Action Complaint, ¶5; LEN_0018418-419 (█████████████████ ; LEN-0094793-812 at '795 (██████████████████████ SF_MDL_010997█

caused certain web pages to load incorrectly and in some instances blocked web pages entirely.[9] When users were able to connect, they were subjected to unwanted advertising and pop-ups that were difficult to remove and to stop.[10]

6.   In addition to PC performance implications, the operation of VisualDiscovery on the Affected PCs violated users' privacy rights and exposed them to security risks. For example, in order to operate as intended, VisualDiscovery, without the user's knowledge or consent, broke the secure connection a user thought he or she was creating with an established website, rerouted that connection through a Superfish server and then sent results back to the user in a way that hid the fact that the search had been monitored, hijacked and altered.[11] This activity, commonly referred to as a "man-in-the-middle" attack and a technique called "spoofing" to redirect internet traffic through a third-party computer, is a serious security concern as it allows the attacker to inspect all data being sent between the computers, including user names, credit card numbers, and any other personal information of interest to the attacker.[12] The process by which Superfish did all of this relied on a single common digital key and weak password that were shared by all of the computers and easily accessible to a computer hacker, who could use them to access an affected computer on any public network and collect whatever information was being transmitted at the time.[13]

LEN-055529-539 (███████████

[9] Consolidated Class Action Complaint, ¶5; LEN-0068738-750 at '746 █████████

LEN-0068738-750 at '744-745 (████████████████ LEN-0064650 (███████████████████████); Rubin Decl., ¶¶ 77-78.

[10] Consolidated Class Action Complaint, ¶5.

[11] Consolidated Class Action Complaint, ¶6; LEN-048302-304 ████████████████ Dan Goodin, "'SSL Hijacker' behind Superfish Debacle Imperils Large Number of Users," Ars Technica, February 20, 2015, http://arstechnica.com/security/2015/02/ssl-hijacker-behind-superfish-debacle-imperils-big-numberof-users/, accessed July 20, 2016 (pinning the HTTPS issue on SSL hijacker); David Auerbach, "You Had One Job, Lenovo," February 20, 2015, Slate, http://www.slate.com/articles/technology/bitwise/2015/02/lenovo_superfish_scandal_why_it_s_one_of_the_worst_consumer_computing_screw.html, accessed June 7, 2016 (same); LEN-0048302-304 (████████████████████████████ ; Rubin Decl., ¶¶37, 39-43, 45-46.

[12] Rubin Decl, ¶ 47.

[13] Consolidated Class Action Complaint, ¶6; LEN-0018290-294 (█████████████████████████ LEN-0048830; LEN-0013600-604 at '603; LEN-0018418-419; LEN-

7.   In summary, Class Plaintiffs allege that they have been harmed by Lenovo's inclusion of VisualDiscovery in the Affected PCs in at least three ways: (1) VisualDiscovery degraded the performance of the Affected PCs, (2) Lenovo violated Class Plaintiffs' privacy rights and (3) Lenovo exposed Class Plaintiffs to security risks.[14]

2. ASSIGNMENT

8.   I have been retained on behalf of Class Plaintiffs to develop common methodologies to reliably measure the monetary harm Class Members suffered as a result of the Lenovo's alleged wrongful conduct. For purposes of this analysis, I have not considered any statutory damages or actual damages that may be available to Class Plaintiffs under specified legal theories.

9.   For purposes of developing the common restitution and damages methodologies that I set forth in this report, I have assumed that Class Plaintiffs' allegations are true. My opinions expressed in this report relate solely to methodologies to measure Class Plaintiffs' restitution and damages, and I offer no opinions related to the veracity of Class Plaintiffs' allegations or their legal entitlement to recover damages.

3. QUALIFICATIONS

10.   I am an independent expert in analyzing and measuring the financial impact associated with alleged wrongful conduct. I hold a Bachelor of Arts degree in Business Administration from the University of Washington. I held an active license as a Certified Public Accountant for 26 years until I voluntarily elected to change to inactive status effective March 2015. I hold a Certified Management Accountant certificate issued by the Institute of Management Accountants. I am the founder and a Managing Director of LitiNomics, which is a consulting firm comprised of professionals who provide financial and economic analyses to counsel and management involved in commercial litigation.

0018290-294

); LEN-0013600-604 at '601; LEN-0013600-604

Rubin Report, ¶47.

[14]   Consolidated Class Action Complaint, ¶¶158, 185, 197, 249, 260, 276.

11.   My entire 31-year professional career has been devoted to the analysis of financial, economic, and accounting issues that arise in commercial litigation, and in particular, to the measurement of economic damages. In connection with my work, I have prepared damages analyses in over 280 disputes. I have testified as an expert witness with respect to financial and economic issues in federal, state, and bankruptcy courts and in arbitration proceedings. I have given sworn testimony as a damages expert in 78 matters, 19 of which were class action suits.

12.   A list of my current and past professional affiliations, positions, publications, presentations, and cases in which I have consulted and/or testified throughout my professional career is contained in my most recent curriculum vitae, which is attached hereto as Exhibit 1.

4. SUMMARY OF OPINIONS[15]

13.   I have reached the following opinions:

- Class Member and class-wide restitution and damages can be measured using a common methodology based on the lost value Class Members suffered as a result of the inclusion of VisualDiscovery software on Affected PCs;

- Class Members' lost value is subject to common proof and calculation as a monetary sum equal to the price paid for an Affected PC multiplied by the number of days VisualDiscovery was operating on the Affected PC divided by the expected useful life of the Affected PC (measured in days);

- The intense competition in the consumer PC market and the abundance of alternative consumer PCs not preloaded with VisualDiscovery that were available to Class Members during the Class Period indicate that VisualDiscovery reduced the value of the PCs and consumers would not have purchased a Lenovo Affected PC with the preloaded VisualDiscovery fully disclosed, as consumers could switch away from the Lenovo Affected PCs and avoid the negative value associated with VisualDiscovery at no added cost;

- Class Member and class-wide relief can alternatively be measured using a component restitution/damages methodology whereby restitution/damages related to the diminution in Affected PC performance, privacy violations and exposure to security risks caused by VisualDiscovery are measured and quantified;

---

[15]   The opinions that I express in this report are based on information available to me as of the date of my report. I reserve the right to modify my opinions if additional information is made available to me or if I become aware of factors that I did not foresee in preparing my analysis.

6

- Restitution/damages related to the diminution in Affected PC performance can be measured on a class-wide basis using a common formula based on (1) the amount of diminution in Affected PC performance caused by VisualDiscovery and (2) the market price consumers pay to obtain increments of additional PC performance.

14.   In the remainder of this report, I set forth the bases supporting my opinions.

5. METHOLOGIES TO MEASURE CLASS PLAINTIFFS' RELIEF

15.   In the following sections I describe common methodologies to measure Class Members' and the class-wide monetary harm suffered as a result of the Lenovo's alleged wrongful conduct.

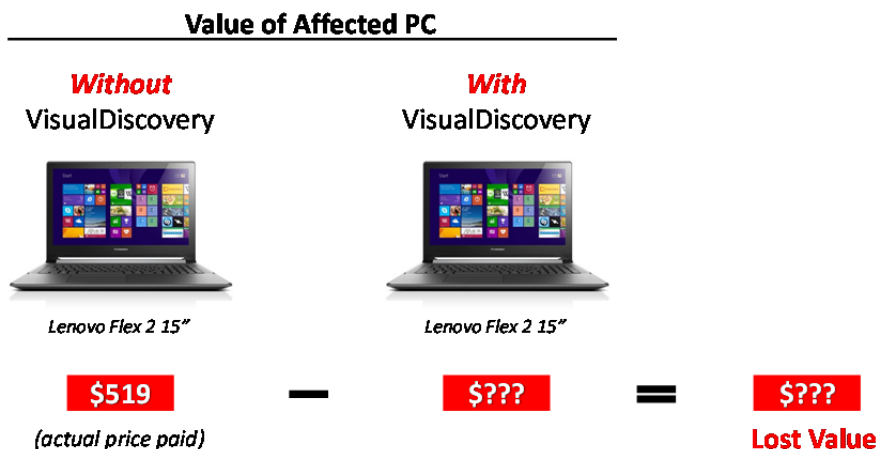### 5.1   Loss in Value Methodology

16.   In this section, I set forth a common methodology to calculate Class Plaintiffs' "loss in value" that resulted from Lenovo's inclusion of VisualDiscovery in the Affected PCs purchased by Class Plaintiffs either directly from Lenovo or from third-party retailers.

5.1.1   Description of Loss in Value Methodology

17.   In a commercial transaction, the buyer and seller exchange mutual consideration—the *quid pro quo*—of <u>equal</u> value. Thus, the purchase price reflects the market value of that which the buyer *believed* he/she purchased the relevant product at the time of purchase. Consumers purchase PCs in order to use them. Thus, the price consumers pay to purchase a PC reflects the minimum market value of the "use" consumers expect they will obtain from the PC.

18.   Unknown to Class Plaintiffs at the time of purchase, the Affected PCs were preloaded with VisualDiscovery. As Class Plaintiffs had no knowledge of the privacy violations, security risks and degradation in PC performance caused by VisualDiscovery, the purchase price paid necessarily reflects the fair market value of the Affected PCs that Class Plaintiffs expected *absent the VisualDiscovery software*. Class Plaintiffs' restitution/damages can be computed on a class-wide bases as difference between (1) the purchase price Class Plaintiffs paid (i.e., the value of an Affected PC *without* VisualDiscovery) minus (2) the value of an Affected PC that Class Plaintiffs actually obtained (i.e., the Affected PC *with* VisualDiscovery). This formula is illustrated in Figure 2 below:

Figure 2: Illustration of "Loss in Value" Methodology

Value of Affected PC

Without VisualDiscovery — *With* VisualDiscovery

Lenovo Flex 2 15" — Lenovo Flex 2 15"

$519 (actual price paid) — $??? = $??? **Lost Value**

19.   As explained in paragraph 17, above, consumers value the use they obtain from a PC over its expected useful life by an amount equal to at least the consideration they exchanged for the product in the market place, i.e., the price they paid to purchase the PC. Thus, a consumer who paid $600 for a laptop and used the laptop over a 36-month useful life[16] paid the equivalent of $16.67 per month in value for the laptop. This concept is illustrated in Figure 3 below:

---

[16]   Thirty-six months (or three years) is a commonly applied time period for the useful life of a computer. https://www.irs.gov/irm/part1/irm_01-035-006.html, last accessed on July 22, 2016.
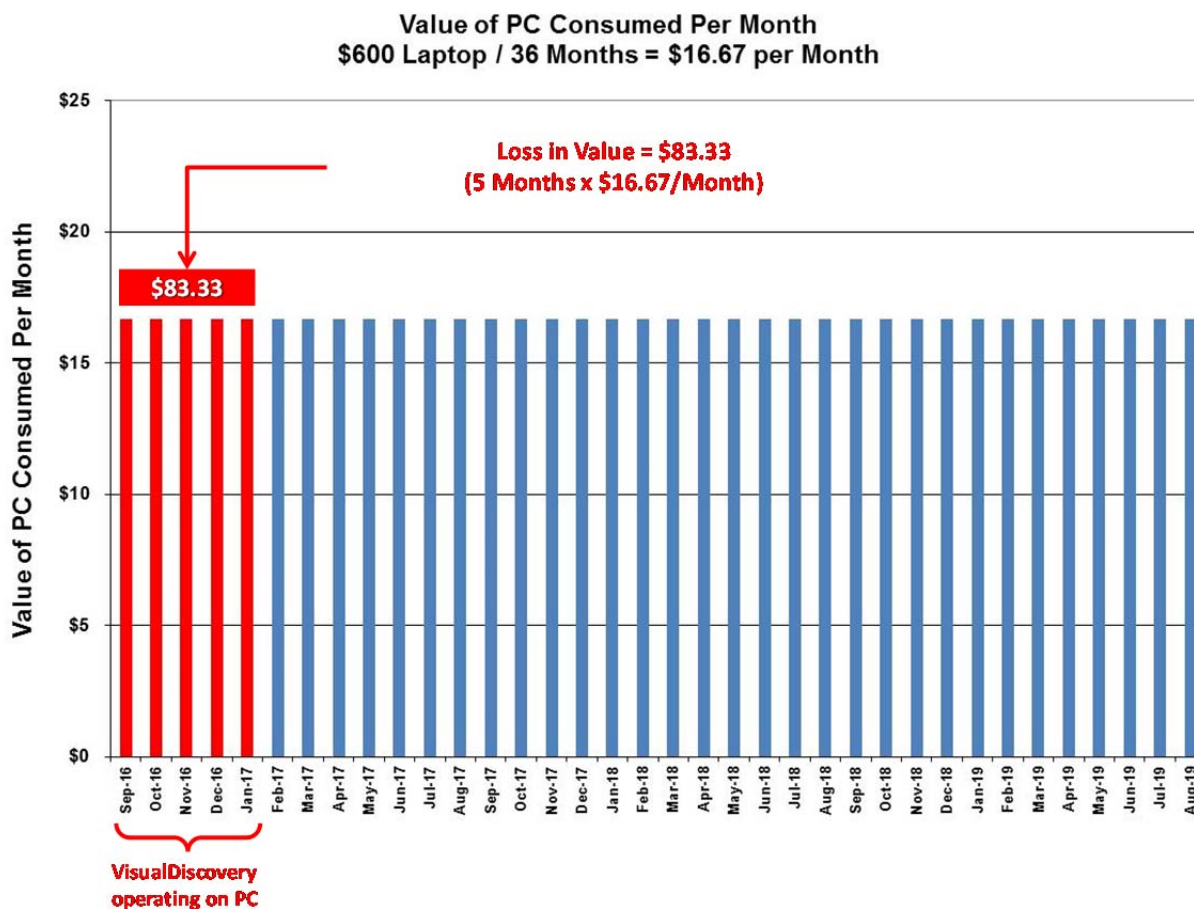
Figure 3: Illustration of the Value Paid for Laptop During Expected Useful Life

Value of PC Consumed Per Month
$600 Laptop / 36 Months = $16.67 per Month
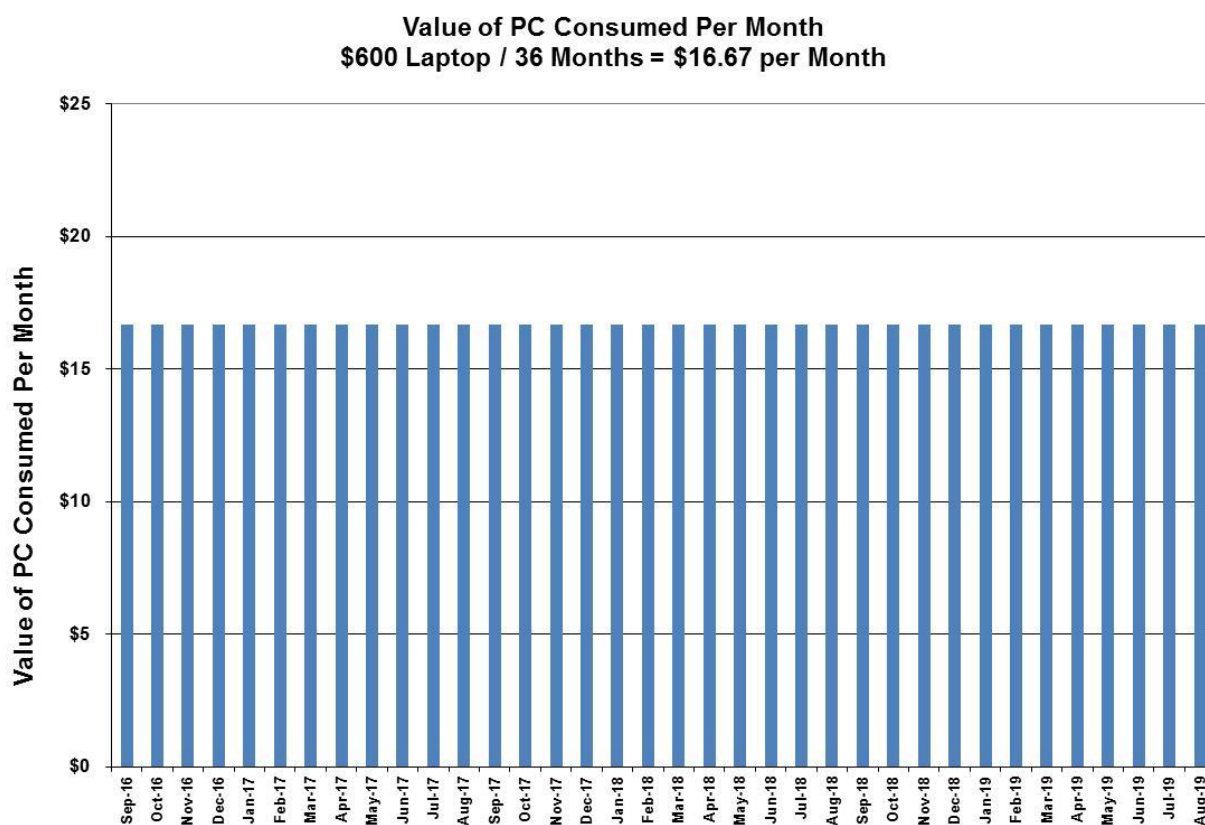
20.   These objective market price value assumptions, drawn from a real world, competitive commercial transaction, provide a common starting point for computing the loss in value to Class Plaintiffs that was caused by VisualDiscovery. For example, assuming a Class Plaintiff in September 2014 purchased and began using an Affected PC in the month of purchase, and as a result privacy violations, exposure to security risks, and the degraded PC performance caused by VisualDiscovery, the Class Plaintiff obtained a net negative value (more harm than good) from the Affected PC until February 2015 when the deleterious effects of VisualDiscovery could be remediated, the loss in value suffered can be calculated in monetary terms in a common manner for all Class Members on a class-wide basis. An illustration of this computation, which uses a theoretical Affected PC with a purchase price of $600 and a three-year product life-span[17] is shown in Figure 4 below:

---

[17] The computation assumes a three-year (or 36 month) life span for a consumer laptop sold in the United States in 2014. The three-year useful life assumption is a rational assumption: this is the useful life

Figure 4: Illustration of Calculation of "Loss in Value"

Value of PC Consumed Per Month
$600 Laptop / 36 Months = $16.67 per Month

Loss in Value = $83.33
(5 Months x $16.67/Month)

$83.33

VisualDiscovery operating on PC

21.   The value of an Affected PC per month paid for but not received represents the loss of value Class Plaintiffs' incurred (i.e., the red bars in Figure 4).[18]   Applying the methodology illustrated in Figure 4 above, restitution/damages for an individual Class member, as well as for the Class as a whole, can be measured based on the following common equation:

---

span afforded laptop computers by the United States Internal Revenue Service in 2014. https://www.irs.gov/irm/part1/irm_01-035-006.html, last accessed on July 22, 2016

[18]   This methodology results in restitution / damages equal to the difference in market value immediately before the injury ($600 purchase price) and immediately after the injury ($0 market value of PC due to VisualDiscovery) factoring in any subsequent value that consumers received once the harm (VisualDiscovery) is removed (i.e., the blue bars in Figure 4).

Figure 5:   Equation to Calculate Individual Class Member and Class-Wide Restitution/Damages

$$\text{Restitution/Damages} = \text{Purchase Price Paid} \ \times \ \frac{\text{\# of Days Visual Discovery Operating in PC}}{\text{Expected Useful Life of PC (in days)}}$$

22.   Importantly, the example calculation shown in Figure 5 assumes that the *net* value the Class member obtained from using the Affected PC during the period VisualDiscovery was operating in the PC is zero (or negative)—i.e., any *positive* value the user enjoyed during the period in which VisualDiscovery was operating was more than offset by the *negative* cost associated with VisualDiscovery. This concept is illustrated in Figure 6 below:

Figure 6:   Illustration of Zero or Negative Net Value of PC with VisualDiscovery
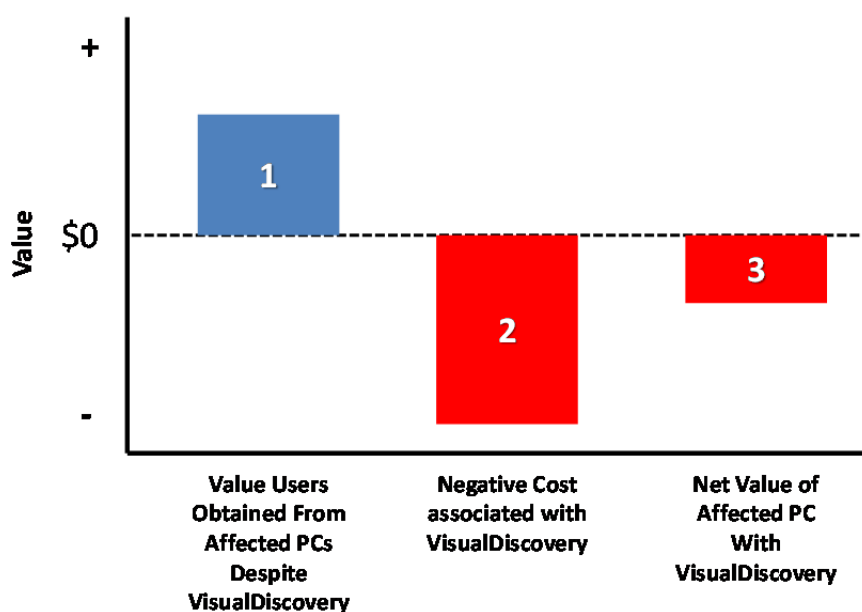
23.   The assertion that the *net* value a user obtained from using an Affected PC during the period when VisualDiscovery was operating is zero (or negative) is based on my understanding that consumers would likely not knowingly use *any* PC if such use resulted in the exposure to an unintended third party of all their most private and confidential information transmitted using the PC and increasing their exposure to security risks as allegedly occurred

as a result of VisualDiscovery.[19] More importantly, consumers would likely not knowingly purchase a Lenovo Affected PC with VisualDiscovery given the abundance of alternative consumer PCs available in the market, containing the same or substantially similar features and being sold at substantially similar price points, but which were marketed and sold without VisualDiscovery pre-installed. Industry data supports this analysis. According to market data, the market for consumer PCs is highly competitive, with established companies vying for market share. Although in 2014 Lenovo had the largest market share for worldwide PC shipments, Lenovo was barely ahead of its competition.[20] According to IDC's Worldwide Quarterly PC Tracker, while Lenovo's market share for worldwide PC shipments was 19.2 percent, HP was close behind with a market share of 18.4 percent; Dell had a market share of 13.5 percent; and Acer and Apple were the next two companies with a market share of 7.8 percent and 6.4 percent, respectively.[21] In the United States, Lenovo had the number four position in the PC market with a market share of 10.7 percent in 2014.[22] The leaders were HP, Dell and Apple with a market share of 27.6 percent, 24.3 percent and 12.2 percent, respectively.[23] According to IDC data, the top five PC vendors in the U.S. in 2014 (based on units shipped) were as follows:

---

[19] See discussions of security risks created by VisualDiscovery beginning on pp. 20 and 24.

[20] IDC Press Release: PC Leaders Continue Growth And Share Gains As Market Remains Slow, According to IDC, January 12, 2015, http://www.idc.com/getdoc.jsp?containerId=prUS25372415, accessed June 7, 2016.

[21] IDC Press Release: PC Leaders Continue Growth And Share Gains As Market Remains Slow, According to IDC, January 12, 2015, http://www.idc.com/getdoc.jsp?containerId=prUS25372415, accessed June 7, 2016.

[22] IDC Press Release: PC Leaders Continue Growth And Share Gains As Market Remains Slow, According to IDC, January 12, 2015, http://www.idc.com/getdoc.jsp?containerId=prUS25372415, accessed June 7, 2016.

[23] IDC Press Release: PC Leaders Continue Growth And Share Gains As Market Remains Slow, According to IDC, January 12, 2015, http://www.idc.com/getdoc.jsp?containerId=prUS25372415, accessed June 7, 2016.

Figure 7: **Top 5 Vendors, United States PC Shipments, 2014 (Units Shipments are in Thousands)[24]**

Vendor	2014 Shipments	2014 Market Share
1. HP	18,332	27.6%
2. Dell	16,158	24.3%
3. Apple	8,085	12.2%
4. Lenovo	7,100	10.7%
5. Toshiba	4,299	6.5%
Others	12,396	18.7%
Total Market	**66,370**	**100.0%**

24.   Lenovo references the competition it faced in its 2014/2015 annual report by stating that "[t]he Group operates in a highly competitive industry which faces rapid changes in market trends, consumer preferences and constantly evolving technological advances in hardware performance, software features and functionality."[25]

25.   Manufacturers of low-end consumer PCs compete for market share based on price. In its 2014/2015 annual report, Lenovo references price competition as one of its biggest business risks it faces:

> *We face aggressive product and price competition from competitors. Failure to respond effectively to changes in market trends or consumer preferences at competitive prices against the*

---

[24] IDC Press Release: PC Leaders Continue Growth And Share Gains As Market Remains Slow, According to IDC, January 12, 2015, http://www.idc.com/getdoc.jsp?containerId=prUS25372415, accessed June 7, 2016.

[25] Lenovo Group Limited 2014/15 Annual Report, p. 23, http://www.lenovo.com/ww/lenovo/pdf/ E_099220150527.pdf, accessed June 7, 2016.

backdrop of global slowdown in the traditional PC market could harm our competitive position.[26]

26.   Lenovo's biggest competitor, HP, also references price competition in the PC market in its 2014 annual report:[27]

> *The markets in which Personal Systems operates are highly competitive and are characterized by price competition and inventory obsolescence. The decline in the PC market and the ongoing shift among customers to mobility products has further intensified competition in the PC market.*

27.   As one example, both Dell and Acer offered PCs that were comparable to Lenovo's Affected PC G50-30 laptop, as shown in Figure 8 below:

---

[26]   Lenovo Group Limited, 2014/15 Annual Report, p. 23, http://www.lenovo.com/ww/lenovo/pdf/E_099220150527.pdf, accessed June 7, 2016.

[27]   HP 2014 Annual Report, http://h30261.www3.hp.com/~/media/Files/H/HP-IR/documents/reports/2015/hpq-annual-report-2014.pdf, accessed June 7, 2016.

Figure 8:   Comparison of Lenovo Affected PC G50-30 Laptop to Competing Dell and Acer PCs[28] [29] [30]

	Lenovo's G50-30	Dell's Inspiron 15 3000	Acer's Aspire ES1-511-C0DV
Price	$249.99	$249.99	$249.99
Display Size	15.6" HD	15.6" HD	15.6" HD
Processor	Intel® Celeron® Processor N2830 (2.16 GHz 1600MHz 1MB)	Intel® Celeron® Processor N3050 (2M Cache, up to 2.16 GHz)	Intel Celeron N2830 / 2.16 GHz
Operating System	Windows 8.1	Windows 10	Windows 8.1
Memory	2 GB	4 GB	4 GB
Storage	320 GB	500 GB	512 GB
Battery	Up to 4 hours	Up to 6.5 Hours	Up to 5 Hours
Weight	5.51 lbs	4.71 lbs	5.29 lbs
Graphics Card	Intel HD Graphics	Intel HD Graphics	Intel HD Graphics

28.   The intense competition in the PC market and the abundance of alternative consumer PCs not preloaded with VisualDiscovery that were available during the Class Period indicate that VisualDiscovery reduced the value of the PCs and consumers would not have

---

[28]   Source for price: Lenovo, Lenovo G Series, <https://web.archive.org/web/20140927072455/http://shop.lenovo.com/us/en/laptops/lenovo/gseries>, accessed on June 7, 2016. Source for specifications: Lenovo, Lenovo G50-30 Laptop, <http://shop.lenovo.com/us/en/laptops/lenovo/gseries/ g5030/# tabtech_ specs>, accessed on July 18, 2016.

[29]   Source for price: Dell, Laptop and 2-in-1 PCs, <https://web.archive.org/web/20140921000627/http://www.dell.com/us/p/laptops.aspx?~ck=mn>, accessed on 06/08/2016. Source for specifications: Dell, Inspiron 15 3000 Series Laptop, <http://www.dell.com/us/business/p/inspiron-15-3558-laptop/pd?ref=PD_OC>, accessed on July 18, 2016.

[30]   Source for price: Acer, Aspire ES1-511-C0DV, <https://web.archive.org/web/20140820205144/http://us.acer.com/ac/en/US/content/model/NX.MMLA A.006>, accessed on June 8, 2016. Source for specifications: Specout, Acer ES1-511-C0DV, <http://laptops.specout.com/l/5719/ES1-511-C0DV>, accessed on July 18, 2016.

purchased a Lenovo Affected PCs with the preloaded VisualDiscovery *fully disclosed*, as consumers could switch away from the Lenovo Affected PCs and avoid the negative value associated with VisualDiscovery at no added cost.

29.   In addition to these market data, I understand that Plaintiffs are having a consumer survey performed to analyze the value consumers place on laptop PCs that carry the privacy issues and security risks that were present on the Lenovo Affected PCs. The results will provide a value in percentage and dollar amount that customers place on laptops without tailored ad software installed (and therefore no privacy issues or security risks) compared to the value of the laptops with tailored ad software installed (which has privacy issues and security risks). The survey results are not available yet, however, the data obtained from such a survey could be used as an alternative, common item of proof to show that negative value of Lenovo Affected PCs with preloaded VisualDiscovery fully disclosed exceeds the positive value received by Affected PC owners during the period VisualDiscovery was loaded and operating on their Affected PCs, such that the information omitted at the time of sale was both material to consumers and resulted in an overpayment or loss of value.

30.   The assertion that the *net* value the user obtained from using a Lenovo Affected PC during the period when VisualDiscovery was operating in the PC is zero (or negative) rests on two predicates: (1) the value users obtained from VisualDiscovery is *negative* (i.e., a "cost" associated with VisualDiscovery), and (2) the cost of VisualDiscovery is greater than (i.e., more than offsets) any positive value users obtained from using the Affected PCs despite the presence of VisualDiscovery.[31] In the following sections, I describe various indicia relevant to assessing the veracity of these two predicates.

5.1.2   Predicate #1: The Value from VisualDiscovery is Negative

31.   The first predicate is that the value of VisualDiscovery is negative—i.e., rather than obtaining positive value, consumers instead incurred a cost as a result of the operation of VisualDiscovery on their Affected PCs. It is my understanding that VisualDiscovery is an installer than injects a browser add-on that detects when a website has advertising and replaces it with targeted images based on what the user is looking at in order to make informed choices

---

[31] Notwithstanding the adverse consequences of VisualDiscovery, Class members potentially obtained some positive value from their Affected PCs, such as writing documents, working with email, navigating the internet, etc.

at potentially lower prices.[32] Below I evaluate indicia relevant to assessing the veracity of this first predicate.

5.1.2.1   The Extent to Which Lenovo and Superfish Touted to Consumers the Benefits of VisualDiscovery in the Affected PCs

32.   If an installed software provided positive benefits to PC users, such software and the benefits it provided would likely be touted by the PC manufacturer. Contrary to touting the presence of VisualDiscovery on its Affected PCs, however, I understand Lenovo concealed the fact that its laptops had pre-installed VisualDiscovery. ████████████████████████████

██

██ ██ ██████████████

██

████████████████████████████ ”[34]

33.   Lenovo usually lists the third party software installed on each computer under the "Tech Specs" description for each model on its website.[35] However, VisualDiscovery was not identified anywhere on Lenovo's website.[36] A prospective purchaser of a Lenovo computer would have been unaware that the VisualDiscovery program was going to be pre-installed on the computer.[37]

34.   Based on the documents I have reviewed and research I have performed, I am unaware of any instance in which Lenovo touted any benefits of VisualDiscovery to consumers.

35.   Lenovo's and Superfish's efforts to conceal the presence of VisualDiscovery in the Affected PCs and the absence of Lenovo touting any benefits of VisualDiscovery to consumers are indicia that the value users obtained from VisualDiscovery operating on their Affected PCs was at most zero or negative.

---

[32] Ian Cutress, "Lenovo, SuperFish and Security," *AnandTech*, February 19, 2015 http://www.anandtech.com/show/8993/lenovo-superfish-and-security, accessed June 9, 2016.

[33] Consolidated Class Action Complaint, ¶68; LEN-0043675-679.

[34] Consolidated Class Action Complaint, ¶68; LEN-0043675-679.

[35] Consolidated Class Action Complaint, ¶83; LEN-0034956-679.

[36] Consolidated Class Action Complaint, ¶83.

[37] Consolidated Class Action Complaint, ¶83.

5.1.2.2   Extent to Which Consumers Touted the Benefits of VisualDiscovery

36.   Evidence of consumers touting the benefits from use of a product is evidence of positive value. Conversely, evidence of consumers claiming adverse consequences from use of a product is evidence of negative value.

37.   It is my understanding that there is a complete absence of any consumer touting any benefits from use of VisualDiscovery, and it appears that the only comments from consumers were negative. The absence of evidence of consumers touting any benefits of VisualDiscovery, combined with the numerous complaints about the adverse consequences from using VisualDiscovery are indicia that the value users obtained from VisualDiscovery operating on their Affected PCs was negative.

5.1.2.3   Extent to Which Consumers Desired and Paid Money to Obtain VisualDiscovery

38.   Evidence of consumer demand and a willingness to pay to obtain a product is evidence of positive value. Based on my review of the documents produced in this case and my independent research, I am unaware of any evidence demonstrating that a PC user desired and paid money to obtain VisualDiscovery.

39.   Superfish did not market or sell VisualDiscovery independently, nor did consumers pay to obtain VisualDiscovery. Instead, Superfish partnered with Lenovo to load VisualDiscovery onto certain Lenovo computers sold to consumers, ██████████████ ██ ███████████████████[8]

40.   The absence of consumer demand and payment for VisualDiscovery are indicia that the value users obtained from VisualDiscovery operating on their Affected PCs was at most zero or negative.

5.1.2.4   Extent to Which VisualDiscovery Was Commercially Successful

41.   Commercial success of a product is evidence that the product provides positive value. An absence of commercial success is evidence that the product does not provide positive value.

---

[38]   Consolidated Class Action Complaint, ¶74; SF_MDL_010342-361 at '355.

42.   The VisualDiscovery software was not commercially successful and received negative reviews from users and security researchers.

43.   I have seen no evidence that any other PC manufacturer has installed VisualDiscovery on their products. PC manufacturers usually list software installed on their products under the technical specification description on their websites. I have reviewed websites of top consumer PC vendors such as HP, Dell, Apple, and Toshiba and found that VisualDiscovery was not pre-installed or offered to be installed on any of the products manufactured by these vendors.

44.   VisualDiscovery has been regarded as malware or adware by many sources, including the U.S. government, computer security software companies such as Microsoft and computer security researchers.[39] A computer security researcher Robert Graham, who obtained and broke the security of the VisualDiscovery root certificate, wrote in his blog post about Superfish and its software:[40]

> *The company claims it's providing a useful service, helping users do price comparisons. This is false. It's really adware. They don't even offer the software for download from their own website. It's hard Googling for the software if you want a copy because your search results will be filled with help on removing it. The majority of companies that track adware label this as adware.*

45.   A Slate Tech writer David Auerbach also described Superfish as a company that "has a long history of disseminating adware, spyware, malware, and crapware."[41]

46.   Superfish has been criticized even before the Lenovo security incident and has a long history of "malware complaints and international surveillance."[42] One Apple Mac forum

---

[39] Alert (TA15-051A), Lenovo Superfish Adware Vulnerable to HTTPS Spoofing, February 20, 2015, https://www.us-cert.gov/ncas/alerts/TA15-051A, accessed June 3, 2016.
Paul Wagenseil, "Lenovo's Security-Killing Adware: How to Get Rid of It," *Tom's Guide*, February 20, 2015, http://www.tomsguide.com/us/lenovo-superfish-adware-removal-news-20470.html, accessed June 8, 2016.
[40] Jennifer LeClaire, "Lenovo PCs Ship with Nasty Malware, Putting User Data at Risk," *Sci-Tech Today*, February 19, 2015, http://www.sci-tech-today.com/story.xhtml?story_id=11000CA8NKRU#, accessed June 8, 2016.
[41] David Auerbach, "You Had One Job, Lenovo," February 20, 2015, http://www.slate.com/articles/technology/bitwise/2015/02/lenovo_superfish_scandal_why_it_s_one_of_the_worst_consumer_computing_screw.html, accessed June 7, 2016.

started in 2012 was full of complaints about a technology called Window Shopper built by Superfish.[43] This software found its way onto people's computers by being bundled with other software such as an Oracle Java download or an "Awesome Screenshot" extension.[44] Members of the forum could not understand how the Superfish software had wormed its way onto their machines and a few users had some trouble locating Window Shopper to uninstall it.[45] Microsoft Windows users had similar experience back in 2011 as did Mozilla Firefox fans in 2010.[46]

47.   Shortly after the detection of VisualDiscovery in Lenovo's products, Superfish decided to distance itself from the fallout, shut down and form a new company JustVisual.[47] Superfish co-founder, Adi Pinhas, commented that this move "was accelerated by a firestorm that erupted three months ago when researchers found a worrisome security flaw in Superfish software that came pre-installed on some laptop computers sold by Lenovo."[48]

48.   The absence of commercial success, combined with the widespread criticism of VisualDiscovery, are indicia that the value users obtained from VisualDiscovery operating on their Affected PCs was negative.

[42] Thomas Fox-Brewster, "Superfish: A History Of Malware Complaints And International Surveillance," *Forbes*, February 19, 2015, http://www.forbes.com/sites/thomasbrewster/2015/02/19/superfish-history-of-malware-and-surveillance/#453430ae5d7e, accessed June 8, 2016.

[43] Thomas Fox-Brewster, "Superfish: A History Of Malware Complaints And International Surveillance," *Forbes*, February 19, 2015, http://www.forbes.com/sites/thomasbrewster/2015/02/19/superfish-history-of-malware-and-surveillance/#453430ae5d7e, accessed June 8, 2016.

[44] Thomas Fox-Brewster, "Superfish: A History Of Malware Complaints And International Surveillance," *Forbes*, February 19, 2015, http://www.forbes.com/sites/thomasbrewster/2015/02/19/superfish-history-of-malware-and-surveillance/#453430ae5d7e, accessed June 8, 2016.

[45] Thomas Fox-Brewster, "Superfish: A History Of Malware Complaints And International Surveillance," *Forbes*, February 19, 2015, http://www.forbes.com/sites/thomasbrewster/2015/02/19/superfish-history-of-malware-and-surveillance/#453430ae5d7e, accessed June 8, 2016.

[46] Thomas Fox-Brewster, "Superfish: A History Of Malware Complaints And International Surveillance," *Forbes*, February 19, 2015, http://www.forbes.com/sites/thomasbrewster/2015/02/19/superfish-history-of-malware-and-surveillance/#453430ae5d7e, accessed June 8, 2016.

[47] Brandon Bailey, "Controversial Startup Superfish Says It Will Use 'Visual Search' In New Business," *Associated Press,* May 29, 2015, http://www.theglobeandmail.com/report-on-business/small-business/sb-managing/controversial-startup-superfish-says-it-will-use-visual-search-in-new-business/article24692192/, accessed June 8, 2016.

[48] Brandon Bailey, "Controversial Startup Superfish Says It Will Use 'Visual Search' In New Business," *Associated Press,* May 29, 2015, http://www.theglobeandmail.com/report-on-business/small-business/sb-managing/controversial-startup-superfish-says-it-will-use-visual-search-in-new-business/article24692192/, accessed June 8, 2016.

5.1.2.5 Extent to Which VisualDiscovery Violated Users' Privacy Rights and/or Exposed Them to Security Risks

49.   The extent to which a software product protects users from violations of privacy rights and security risks is evidence of positive value.   Conversely, the extent to which a software product violates users' privacy rights and/or exposes them to security risks is evidence of negative value.

50.   Plaintiffs allege that the use of VisualDiscovery violated users' privacy rights and exposed users to security risks. By actively tracking websites that users visit, VisualDiscovery put users' privacy and security at risk.[49]   Lenovo users publicly expressed their concern about their privacy violations. Below are some examples of Lenovo user messages posted on Lenovo user forums:[50]

> *A bluntant (sic) man-in-the-middle attack malware breaking any privacy laws.*
>
> *Superfish Inc aka VisualDiscovery… will hijack ALL your secure webconnections (SSL/TLS) by using self signed root certificate authority, making it look legitimate to the browser…*
>
> *Here's an example of my connection to a bank, which looked OK to browser but certificate obviously has been tampered with allowing Superfish to collect all data une[n]crypted.*

51.   VisualDiscovery also exposed users to security risks by decrypting the websites the user visits and replacing the website's advertisements with a mix of secure and unsecure content.[51] With this exposure to unsecure content, VisualDiscovery opened up the possibility of malicious software coming in and stealing sensitive information.[52]   According to a Slate Tech writer David Auerbach, "Superfish intentionally pokes a gigantic hole into your browser security

---

[49] Ian   Cutress,   "Lenovo,   SuperFish   and   Security,"   *AnandTech*,   February   19,   2015 http://www.anandtech.com/show/8993/lenovo-superfish-and-security, accessed June 9, 2016.

[50] Lenovo   Forums: Potentially   Unwanted   Program   -   Superfish   VisualDiscovery, https://forums.lenovo.com/t5/Security-Malware/Potentially-Unwanted-Program-Superfish-VisualDiscovery/td-p/1794457, accessed June 9, 2016.

[51] Ian   Cutress,   "Lenovo,   SuperFish   and   Security,"   *AnandTech*,   February   19,   2015 http://www.anandtech.com/show/8993/lenovo-superfish-and-security, accessed June 9, 2016.

[52] Ian   Cutress,   "Lenovo,   SuperFish   and   Security,"   *AnandTech*,   February   19,   2015 http://www.anandtech.com/show/8993/lenovo-superfish-and-security, accessed June 9, 2016.

and allows anyone on your Wi-Fi network to hijack your browser silently and collect your bank credentials, passwords, and anything else you might conceivably type there."[53]

52.   Evidence of VisualDiscovery violating users' privacy rights and exposing them to security risks are indicia that the value users obtained from VisualDiscovery operating on their Affected PCs was negative.

5.1.2.6   Discontinuation of VisualDiscovery Preloads on Lenovo PCs after Public Disclosure Indicates Zero or Negative Value

53.   After published reports about a security vulnerability created by the VisualDiscovery software surfaced, Lenovo took immediate action to remove it.[54] In an open letter from Lenovo CTO Peter Hortensius, dated February 23, 2015, Mr. Hortensius publically acknowledged that the VisualDiscovery software "**frustrated some users without adding value to the experience**… *(emphasis added)*," and Lenovo was "in the process of removing it from… preloads."[55] Mr. Hortensius apologized and assured that Lenovo "stopped the preloads and will not include this Superfish software in any devices in the future."[56] He listed "several critical first steps" Lenovo had taken to "make… PCs safer from this vulnerability as quickly and easily as possible:"[57]

> *On Thursday, Feb. 19, Lenovo provided a manual fix and by Friday, Feb. 20, we provided an automated removal tool to make it simple for our customers to remove Superfish and related files.*
>
> *Also on Friday, our partners, Microsoft, McAfee and Symantec updated their software to automatically disable and remove this Superfish software. This means users with any of these products active will be automatically protected.*
>
> *…all new products already in inventory will be protected. Shortly after the system is first powered-on the AV program will initiate a*

---

[53] David Auerbach, "You Had One Job, Lenovo," *Slate*, February 20, 2015, http://www.slate.com/articles/technology/bitwise/2015/02/lenovo_superfish_scandal_why_it_s_one_of_the_worst_consumer_computing_screw.html, accessed June 7, 2016.

[54] Superfish Updated – An Open Letter From Lenovo CTO PETER Hortensius, February 23, 2015, http://news.lenovo.com/article_display.cfm?article_id=1932, accessed June 3, 2016.

[55] Superfish Updated – An Open Letter From Lenovo CTO PETER Hortensius, February 23, 2015, http://news.lenovo.com/article_display.cfm?article_id=1932, accessed June 3, 2016.

[56] Superfish Updated – An Open Letter From Lenovo CTO PETER Hortensius, February 23, 2015, http://news.lenovo.com/article_display.cfm?article_id=1932, accessed June 3, 2016.

[57] Superfish Updated – An Open Letter From Lenovo CTO PETER Hortensius, February 23, 2015, http://news.lenovo.com/article_display.cfm?article_id=1932, accessed June 3, 2016.

scan and then remove Superfish from the system. For systems which are re-imaged from the backup partition on the HDD Superfish will also be removed in the same manner.

54.   Lenovo's public acknowledgment of a security vulnerability created by VisualDiscovery and Lenovo's efforts to remove VisualDiscovery from PCs' preloads after public disclosure indicate the *negative* value users obtained from VisualDiscovery. Lenovo CTO publically admitted that VisualDiscovery did not add value to user experience but instead "frustrated some users."[58]   These facts indicate that the value users obtained from VisualDiscovery was negative.

5.1.3   Predicate #2: The Cost of VisualDiscovery is Greater Than the Positive Value Users Obtained from Using an Affected PC

55.   The second predicate mentioned above is that the cost of VisualDiscovery is greater than (i.e., more than offsets) any positive value users obtained from using the Affected PCs despite the presence of VisualDiscovery. Below I evaluate indicia relevant to assessing the veracity of this second predicate.

5.1.3.1   The Extent to Which VisualDiscovery Was Made Difficult to Detect and Remove

56.   The extent to which a software product such as VisualDiscovery was made difficult to detect and remove is evidence that the value users obtained was negative, otherwise why expend the resources to conceal it and obfuscate its removal?

57.   It is my understanding that Superfish and Lenovo intentionally made VisualDiscovery difficult to detect and remove by either the user or any internet security and antivirus programs running on the computer. ████████████████████████████
██
██
██
████████   The VisualDiscovery pop-up window did not contain any detailed description of the program, looked similar to many other pop-up ads that appear on many web pages, and if the

---

[58]   Superfish Updated – An Open Letter From Lenovo CTO PETER Hortensius, February 23, 2015, http://news.lenovo.com/article_display.cfm?article_id=1932, accessed June 3, 2016.

[59]   Consolidated Class Action Complaint, ¶69; LEN-0043675-679.

user simply clicked on the close icon [x] or anywhere outside the pop-up window, the window would close and the user was deemed to have accepted the program for all future purposes.[60]

58.   Superfish and Lenovo "buried its software in the lowest level of a computer's operating system, precisely where customers and antivirus products would never detect it..."[61] McAfee, a leading antivirus vendor whose program was pre-installed on many of the Lenovo computers that contained VisualDiscovery, was unable to detect the program for more than five months and only discovered it after the controversy went public in February 2015.[62] The same was true for Symantec, maker of the popular Norton AntiVirus, and Windows, maker of Windows Defender.[63]

59.   Lenovo was also very selective in the computer models that VisualDiscovery was installed on.[64] The software was installed on Lenovo computer models marketed and sold primarily to consumers, and Lenovo carefully avoided installing VisualDiscovery on any computer models marketed and sold to businesses and professionals.[65] As Errata Security CEO Robert Graham noted, "They rely upon the fact that unsophisticated users don't know how to get rid of it, and will therefore endure the ads."[66]

60.   The extent to which Superfish made VisualDiscovery difficult to detect and remove is evidence of significant negative value.

---

[60] Consolidated Class Action Complaint, ¶87; SF_MDL_000036 (; LEN-0037424 (   ); LEN-0094734 (

[61] Nicole Perlroth, "Lenovo and Superfish Penetrate the Heart of a Computer's Security," *Bits*, February 22, 2015, http://bits.blogs.nytimes.com/2015/02/22/lenovo-and-superfish-penetrate-the-heart-of-a-computers-security/, accessed June 3, 2016.

[62] Consolidated Class Action Complaint, ¶86.

[63] Consolidated Class Action Complaint, ¶86.

[64] Consolidated Class Action Complaint, ¶84; LEN-0018418-419 (   ); LEN-0039919-930 (   ); Todd Haselton, "Lenovo Responds to "Superfish" Report, Says Malware is no Longer Active," February 19, 2015, *TechnoBuffalo*, http://www.technobuffalo.com/2015/02/19/lenovo-responds-to-superfish-reportsays-malware-is-no-longer-active/, accessed June 8, 2016 ("They rely upon the fact that unsophisticated users don't know how to get rid of it, and will therefore endure the ads.").

[65] Consolidated Class Action Complaint, ¶84.

[66] Todd Haselton, "Lenovo Responds to "Superfish" Report, Says Malware is no Longer Active," February 19, 2015, *TechnoBuffalo*, http://www.technobuffalo.com/2015/02/19/lenovo-responds-to-superfish-report-says-malware-is-no-longer-active/, accessed June 8, 2016.

5.1.3.2 Significance of Security Risks Created by VisualDiscovery and Value Consumers Place on Security and Privacy

61.   The magnitude of security risks and privacy violations created by VisualDiscovery is illustrated by the fact that on February 20, 2015 the United States Department of Homeland Security issued an alert and advised uninstalling Superfish VisualDiscovery and its associated root CA certificate.[67]   The United States Department of Homeland Security described VisualDiscovery as "spyware" and "adware" pre-installed by Lenovo on some of their PCs and "allowing an attacker to spoof HTTPS traffic."[68]

> *Since the private key can easily be recovered from the Superfish software, an attacker can generate a certificate for any website that will be trusted by a system with the Superfish software installed. This means websites, such as banking and email, can be spoofed without a warning from the browser.[69]*

62.   The United States Department of Homeland Security further stated that "[s]imply uninstalling the software does not remove the certificate…" and Microsoft and Mozilla provide "guidance on detecting and managing certificates…"[70]

63.   Following the United States Department of Homeland Security's alert, Lenovo publically acknowledged that VisualDiscovery provides a security concern and issued Product Security Advisory "SuperFish Vulnerability."[71]   Lenovo labeled the threat presented by VisualDiscovery as "high" and described it as follows:[72]

> *SuperFish intercepts HTTP(S) traffic using a self-signed root certificate. This is stored in the local certificate store and provides a security concern.*

---

[67] Alert (TA15-051A), Lenovo Superfish Adware Vulnerable to HTTPS Spoofing, February 20, 2015, https://www.us-cert.gov/ncas/alerts/TA15-051A, accessed June 3, 2016.

[68] Alert (TA15-051A), Lenovo Superfish Adware Vulnerable to HTTPS Spoofing, February 20, 2015, https://www.us-cert.gov/ncas/alerts/TA15-051A, accessed June 3, 2016.

[69] Alert (TA15-051A), Lenovo Superfish Adware Vulnerable to HTTPS Spoofing, February 20, 2015, https://www.us-cert.gov/ncas/alerts/TA15-051A, accessed June 3, 2016.

[70] Alert (TA15-051A), Lenovo Superfish Adware Vulnerable to HTTPS Spoofing, February 20, 2015, https://www.us-cert.gov/ncas/alerts/TA15-051A, accessed June 3, 2016.

[71] SuperFish Vulnerability - Lenovo Support, https://support.lenovo.com/us/en/product_security/ superfish, accessed June 3, 2016.

[72] SuperFish Vulnerability - Lenovo Support, https://support.lenovo.com/us/en/product_security/ superfish, accessed June 3, 2016.

64.   Lenovo recommended its customers to follow the Lenovo instructions to remove Superfish VisualDiscovery and related files from their PCs.[73] Lenovo also offered to provide the free 6 month subscription "for McAfee antivirus services for Lenovo customers who purchased a Lenovo PC pre-loaded with Superfish software."[74]

65.   Microsoft added the VisualDiscovery software and the Superfish root certificate to the list of malware and other unwanted programs to be detected and deleted by Windows Defender.[75]

66.   Security researchers regarded VisualDiscovery as "the door to online criminals."[76] Chris Palmer, a San Francisco-based security researcher, bought a Lenovo laptop and discovered that his connection to the Bank of America website had been hijacked by Superfish's own root digital certificate, which had substituted itself for Bank of America's own digital certificates.[77] Mr. Palmer and other security researchers found that Superfish used the same private key for all Lenovo computers, meaning that a criminal could easily spoof the certificate.[78] According to Kevin Bocek of Salt Lake City-based online-security firm Venafi, Superfish and Lenovo were "breaking everything that's been built over 20 years to create trust and privacy on the Internet."[79]

67.   The facts that the United States Department of Homeland Security issued the Superfish VisualDiscovery security alert, Lenovo labeled the threat presented by VisualDiscovery as "high" and issued product security advisory and Microsoft added the

---

[73] SuperFish Vulnerability - Lenovo Support, https://support.lenovo.com/us/en/product_security/superfish, accessed June 3, 2016.

[74] Information on Free McAfee Subscription for Lenovo Customers with Superfish Preload, https://support.lenovo.com/us/en/mcafeesubscription, accessed June 7, 2016.

[75] Paul Wagenseil, "Lenovo's Security-Killing Adware: How to Get Rid of It," *Tom's Guide*, February 20, 2015, http://www.tomsguide.com/us/lenovo-superfish-adware-removal,news-20470.html, accessed June 8, 2016.

[76] Paul Wagenseil, "Lenovo's Security-Killing Adware: How to Get Rid of It," *Tom's Guide*, February 20, 2015, http://www.tomsguide.com/us/lenovo-superfish-adware-removal,news-20470.html, accessed June 8, 2016.

[77] Paul Wagenseil, "Lenovo's Security-Killing Adware: How to Get Rid of It," *Tom's Guide*, February 20, 2015, http://www.tomsguide.com/us/lenovo-superfish-adware-removal,news-20470.html, accessed June 8, 2016.

[78] Paul Wagenseil, "Lenovo's Security-Killing Adware: How to Get Rid of It," *Tom's Guide*, February 20, 2015, http://www.tomsguide.com/us/lenovo-superfish-adware-removal,news-20470.html, accessed June 8, 2016.

[79] Paul Wagenseil, "Lenovo's Security-Killing Adware: How to Get Rid of It," *Tom's Guide*, February 20, 2015, http://www.tomsguide.com/us/lenovo-superfish-adware-removal,news-20470.html, accessed June 8, 2016.

VisualDiscovery software to the list of malware are all indicative of the *significant* cost associated with VisualDiscovery.

68.   In order to achieve its goal of replacing website's ads with ones that are aimed at being more relevant to the user, the VisualDiscovery software monitored the web activity of Lenovo users and intercepted encrypted traffic using a "man-in-the-middle attack."[80]   This function was enabled by Lenovo giving VisualDiscovery the permission to issue its own certificates to appear as a trusted party.[81]   The biggest concern of privacy advocates was that the VisualDiscovery software might "be abused for more surreptitious means."[82]   As Forbes writer Thomas Fox-Brewster explained:[83]

> *With Superfish, it's been claimed Lenovo is using a self-signed certificate to appear as a trusted party (which it no doubt considers itself to be) along the chain. In theory, it is therefore able to see users' traffic and alter it in whatever way it sees fit.*
>
> *…*
>
> *From a privacy perspective, this isn't ideal. Lenovo could easily abuse this trust to spy on its PC owners.*

69.   Professor Alan Woodward, a security expert from Surrey University, said: "This bit of software is particularly naughty. People have shown that it can basically intercept everything and it could be really misused… If someone went to, say, the Bank of America then Superfish would issue its own certificate pretending to be the Bank of America and intercept whatever you are sending back and forth."[84]   Ken Westin, a senior analyst at security company Tripwire, agreed: "If… Lenovo is installing their own self-signed certificates, they have not only

---

[80]   Robert McMillan, "Lenovo's Response to Its Dangerous Adware Is Astonishingly Clueless," *Wired*, February 19, 2015, http://www.wired.com/2015/02/lenovo-superfish/, accessed June 9, 2016.
Thomas Fox-Brewster, "How Lenovo's Superfish 'Malware' Works And What You Can Do To Kill It," *Forbes*, February 19, 2015, http://www.forbes.com/sites/thomasbrewster/2015/02/19/superfish-need-to-know/#6c5a392f5f20, accessed June 9, 2016.
[81]   Thomas Fox-Brewster, "How Lenovo's Superfish 'Malware' Works And What You Can Do To Kill It," *Forbes*, February 19, 2015, http://www.forbes.com/sites/thomasbrewster/2015/02/19/superfish-need-to-know/#6c5a392f5f20, accessed June 9, 2016.
[82]   Robert McMillan, "Lenovo's Response to Its Dangerous Adware Is Astonishingly Clueless," *Wired*, February 19, 2015, http://www.wired.com/2015/02/lenovo-superfish/, accessed June 9, 2016.
[83]   Thomas Fox-Brewster, "How Lenovo's Superfish 'Malware' Works And What You Can Do To Kill It," *Forbes*, February 19, 2015, http://www.forbes.com/sites/thomasbrewster/2015/02/19/superfish-need-to-know/#6c5a392f5f20, accessed June 9, 2016.
[84]   Jane Wakefield, "Lenovo Taken to Task Over 'Malicious' Adware," *BBC*, February 19, 2015, http://www.bbc.com/news/technology-31533028, accessed June 9, 2016.

betrayed their customers' trust, but also put them at increased risk."[85] A BetaNews writer Barclay Ballard believed that "the potential damage to the consumer is significant…"[86]

70.   The extent to which VisualDiscovery violated users' privacy rights and severity of security risks to which users were exposed as a result of VisualDiscovery are indicia of significant negative value from VisualDiscovery.

5.1.3.3   Reaction to Disclosure of Lenovo's Installation of VisualDiscovery in Affected PCs

71.   In February 2015, The New York Times and a number of other reputable publications released highly critical articles about Superfish VisualDiscovery.[87]

72.   In a February 22, 2015 The New York Times article titled "Lenovo and Superfish Penetrate the Heart of a Computer's Security," New York Times described Superfish VisualDiscovery as "spyware" that [t]he Chinese computer-making giant Lenovo was inserting… in its PCs. This software could track customers' every online move, intercept secure web sessions and render their computers vulnerable to hackers."[88] The New York Times explained that VisualDiscovery "not only drops ads into a user's web browser sessions, it hijacks a secure browsing session and scoops up data as users enter it into secure websites. In the process, it makes it easy for hackers to intercept communications."[89]

73.   In a February 19, 2015 CNN Money article titled "Lenovo slipped 'Superfish' malware into laptops," CNN stated that "[c]omputer maker Lenovo has been shipping laptops prepackaged with malware that makes you more vulnerable to hackers -- all for the sake of

---

[85]   Jane Wakefield, "Lenovo Taken to Task Over 'Malicious' Adware," *BBC*, February 19, 2015, http://www.bbc.com/news/technology-31533028, accessed June 9, 2016.

[86]   Barclay Ballard, "Lenovo's Superfish Fiasco Has Badly Damaged Consumer Trust," *BetaNews*, February 23, 2015 http://betanews.com/2015/02/23/lenovos-superfish-fiasco-has-badly-damaged-consumer-trust/, accessed June 9, 2016.

[87]   Consolidated Class Action Complaint, ¶¶102-103; Nicole Perlroth, "Researcher Discovers Superfish Spyware Installed on Lenovo PCs*," NY Times*, February 22, 2015, http://bits.blogs.nytimes.com/2015/02/19/researcher-discovers-superfish-spyware-installed-on-lenovo-pcs/, accessed June 3, 2016.

[88]   Nicole Perlroth, "Lenovo and Superfish Penetrate the Heart of a Computer's Security," *NY Times* February 22, 2015, http://bits.blogs.nytimes.com/2015/02/22/lenovo-and-superfish-penetrate-the-heart-of-a-computers-security/, accessed June 3, 2016.

[89]   Nicole Perlroth, "Lenovo and Superfish Penetrate the Heart of a Computer's Security," *NY Times* February 22, 2015, http://bits.blogs.nytimes.com/2015/02/22/lenovo-and-superfish-penetrate-the-heart-of-a-computers-security/, accessed June 3, 2016.

serving you advertisements."[90]   Superfish VisualDiscovery software is "dangerous because it undermines basic computer security protocols."[91]

74.   In a February 20, 2015 article titled "You Had One Job, Lenovo," a Slate Tech writer David Auerbach compared the Superfish VisualDiscovery incident to the Sony DRM rootkit scandal in 2005, "in which Sony automatically installed malware onto users' computers whenever someone loaded certain of their CDs."[92] Mr. Auerbach described Lenovo's actions of "installing Superfish" as "one of the most irresponsible mistakes an established tech company has ever made. *Reckless*, *careless*, and *appalling* don't even come close to covering it."[93]

75.   Consumer outrage over Lenovo's installation of VisualDiscovery software into Affected PCs had been prevalent since mid-2014 and has only skyrocketed since then.[94] Despite Lenovo issuing tutorials showing how to remove VisualDiscovery, consumer's reactions were still filled with "anger and disbelief" at the manufacturer's actions.[95] A BetaNews writer Barclay Ballard commented:[96]

> *For Lenovo to install this kind of software, essentially malware, onto its laptops in order to make more money from advertising is already galling, the fact that it also introduces a vulnerability into the user's system is shocking.*

---

[90] Jose Pagliery, "Lenovo Slipped 'Superfish' Malware Into Laptops," *CNN*, February 19, 2015, http://money.cnn.com/2015/02/19/technology/security/lenovo-superfish/, accessed June 3, 2016.

[91] Jose Pagliery, "Lenovo Slipped 'Superfish' Malware Into Laptops," *CNN*, February 19, 2015, http://money.cnn.com/2015/02/19/technology/security/lenovo-superfish/, accessed June 3, 2016.

[92] David Auerbach, "You Had One Job, Lenovo," *Slate*, February 20, 2015, http://www.slate.com/ articles/technology/bitwise/2015/02/lenovo_superfish_scandal_why_it_s_one_of_the_worst_consumer _computing_screw.html, accessed June 7, 2016.

[93] David Auerbach, "You Had One Job, Lenovo," *Slate*, February 20, 2015, http://www.slate.com/ articles/technology/bitwise/2015/02/lenovo_superfish_scandal_why_it_s_one_of_the_worst_consumer _computing_screw.html, accessed June 7, 2016.

[94] Thomas Fox-Brewster, "How Lenovo's Superfish 'Malware' Works And What You Can Do To Kill It," *Forbes*, February 19, 2015, http://www.forbes.com/sites/thomasbrewster/2015/02/19/superfish-need-to-know/#6c5a392f5f20, accessed June 9, 2016.

[95] Barclay Ballard, "Lenovo's Superfish Fiasco Has Badly Damaged Consumer Trust," *BetaNews*, February 23, 2015 http://betanews.com/2015/02/23/lenovos-superfish-fiasco-has-badly-damaged-consumer-trust/, accessed June 9, 2016.

[96] Barclay Ballard, "Lenovo's Superfish Fiasco Has Badly Damaged Consumer Trust," *BetaNews*, February 23, 2015 http://betanews.com/2015/02/23/lenovos-superfish-fiasco-has-badly-damaged-consumer-trust/, accessed June 9, 2016.

76. Users were particularly angry that they had not been told about the adware.[97] One Lenovo forum user said:[98]

> It's not like they stuck it on the flier saying... we install adware on our computers so we can profit from our customers by using hidden software.
>
> However, I now know this. I now will not buy any Lenovo laptop again.

77. Mr. Ballard believed that even though "[i]ndividual users may be able to fix the Superfish vulnerability on their personal devices," "the wider breakdown in consumer trust may be irreparable."[99]

78. The highly negative reaction of Lenovo consumers to disclosure of Lenovo's pre-installation of VisualDiscovery in Affected PCs and, as a result, damaged consumer trust are evidence of significant cost associated with VisualDiscovery.

79. In conclusion, the extent to which Superfish and Lenovo made VisualDiscovery difficult to detect and remove, the magnitude of security risks and privacy violations created by VisualDiscovery and the reaction to disclosure of Lenovo's installation of VisualDiscovery in the Affected PCs support the assertion that the cost of VisualDiscovery is greater than (i.e., more than offsets) any positive value users obtained from using the Affected PCs.

5.1.4   Use of Consumer Survey to Estimate Class Plaintiffs Damages

80. Based on my experience, I and other damages experts routinely rely on results of consumer surveys in calculating damages. I personally have worked with survey experts who conducted consumer choice-based conjoint surveys to estimate the market value of a particular feature of interest embodied within a multi-featured product. I understand that a consumer survey has been designed for application in this matter to measure the amount of a discount off the purchase price that Class Plaintiffs paid that would be necessary to induce Class Plaintiffs to

---

[97] Jane Wakefield, "Lenovo Taken To Task Over 'Malicious' Adware," *BBC*, February 19, 2015, http://www.bbc.com/news/technology-31533028/, accessed June 9, 2016.

[98] Jane Wakefield, "Lenovo Taken To Task Over 'Malicious' Adware," *BBC*, February 19, 2015, http://www.bbc.com/news/technology-31533028/, accessed June 9, 2016.

[99] Barclay Ballard, "Lenovo's Superfish Fiasco Has Badly Damaged Consumer Trust," February 23, 2015 http://betanews.com/2015/02/23/lenovos-superfish-fiasco-has-badly-damaged-consumer-trust/, accessed June 9, 2016.

purchase PC laptops with VisualDiscovery installed, but fully disclosed prior to the time of purchase.

5.2 Component Restitution / Damages Methodology

81.   In this section I describe methodologies to measure the economic value of the three components of damages Class Plaintiffs allege they suffered as a result of the Lenovo's inclusion of VisualDiscovery in the Affected Laptops: (1) violation of Class Plaintiffs' privacy rights, Class Plaintiffs' exposure to security risks and (3) the degradation in PC performance.

5.2.1 Restitution / Damages Related to Violations of Class Plaintiffs' Privacy Rights

82.   Class Plaintiffs allege that VisualDiscovery's ability to inject advertisements onto secure, encrypted HTTPS websites violated Plaintiffs and Class members' privacy rights because the software tracked the content of the encrypted websites Plaintiffs and Class members accessed.[100] Class Plaintiffs further allege that Plaintiffs and Class members did not consent to Superfish's scanning the content of data they accessed on either unencrypted (HTTP) or encrypted (HTTPS) websites. This unwarranted violation of Plaintiffs and Class members' privacy rights is more extreme in light of the sensitive content displayed on encrypted websites.[101]

83.   Class Plaintiffs' damages related to violations of their privacy rights can be measured based on the discount off the purchase price Lenovo would have had to offer in order to induce consumers to purchase the Affected PCs and knowingly accept the privacy rights violations that result from VisualDiscovery. The amount of such a discount can likely be determined using traditional consumer survey techniques, including conjoint analysis.[102] It is my

---

[100] Consolidated Class Action Complaint, ¶47-54; SF_MDL_013358-361 (██████
██████████████████████████████

[101] ██ Consolidated Class Action Complaint, ¶6, 48; see SF_MDL_013427-428 (██
████████████████████████████████████ SF_MDL_000036 (
███████████████████ ██ ███████████████ ; SF_MDL_013035-040 (█
████████████████████████████

[102] Damages experts routinely rely on consumer surveys for purposes of measuring damages, and specifically for purposes of measuring the value of a specific feature or attribute, or the value of an improvement to or worsening of a feature or attribute, within a multi-featured consumer product. Once such survey technique to measure the market value for a product attribute change is conjoint analysis. See Ofek, E. Srinivasan, V. 2002. How Much Does the Market Value an Improvement in a Product Attribute. *Marketing Science*. INFORMS. Vol. 21, No. 4, Fall 2002, pp. 398-411. *See also*, Steckle, J., L. Stern, R. Befurt, R. Fair. 2013. Is it Worth Anything? Using Surveys in Intellectual Property Cases.

understanding that counsel for Class Plaintiffs has retained a survey expert to perform a consumer survey that will measure the reduction in market value of PC laptops associated with the inclusion of ad injection software with privacy issues and security risks commensurate with that which results from the use of VisualDiscovery. As discussed, above, the data obtained from such a survey can be used as an alternative, common item of proof to show that negative value of Lenovo Affected PCs with preloaded VisualDiscovery fully disclosed exceeds the positive value received by Affected PC owners during the period VisualDiscovery was loaded and operating on their Affected PCs, such that the information omitted at the time of sale was both material to consumers and resulted in an overpayment or loss of value.

84. A survey of computer users conducted to "empirically identify the rhetoric and the reasoning behind users' disgust of spyware" found that (1) a vast majority of the respondents found spyware to be harmful, (2) privacy concerns outweigh the potential benefits of spyware, (3) privacy concerns also outweigh the focused marketing benefits of spyware and (4) privacy concerns are more important than lost CPU cycles.[103] The authors concluded based on the survey results that while privacy and performance were both important issues, privacy was more important than performance.[104] The survey that is being proposed by Class Plaintiff here similarly measures the market value consumers place on their privacy and security when purchasing and using a consumer laptop PC.

5.2.2   Restituion / Damages Related to Exposure to Security Risks

85. Class Plaintiffs allege that defendants exposed Plaintiffs and Class members to severe security risks because VisualDiscovery created a vulnerability that has allowed cyber-attackers and criminals to easily access and steal such private information.[105] As with respect to damages related to Class Plaintiffs' privacy rights violations, damages related to Class Plaintiffs' exposure to security risks can similarly be measured based on the discount off the purchase price Lenovo would have had to offer in order to induce consumers to purchase the

---

AIPLA White Paper, p. 4. ("[S]cholars often employ conjoint analysis, a methodology that relies on a widely accepted model of human decision making. Conjoint analysis has been shown to predict consumers' choices very well and has been employed in high-profile product investment and design decisions for more than three decades.")

[103] Freeman, L and Urbaczewski, A. Why Do People Hate Spyware? *Communications of the ACM*. August 2005/Vol. 48. No. 8, pp. 50-53.

[104] Freeman, L and Urbaczewski, A. Why Do People Hate Spyware? *Communications of the ACM*. August 2005/Vol. 48. No. 8, p. 53.

[105] Consolidated Class Action Complaint, ¶60.

Affected PCs and knowingly accept the exposure to the security risks associated with VisualDiscovery. As discussed above, the amount of such a discount can likely be determined using traditional consumer survey techniques, including conjoint analysis.

5.2.3   Restitution / Damages Related to Degradation in PC Performance

86.   Class Plaintiffs allege that the inclusion of VisualDiscovery adversely impacted the performance of the Affected PCs in the following ways:

- Consumed CPU computing resources (e.g., consumed CPU cycles)
- Consumed memory resources (RAM, hard disk)
- Consumed internet connection bandwidth
- Consumed battery power (reduced use time of single battery charge)
- Increased time to start PC (i.e., increased boot time)
- Created conflicts with other applications

87.   I note that Class Plaintiffs' allegations that VisualDiscovery degraded the performance of the Affected PCs are consistent with academic studies regarding the impact of spyware on PC performance. One such study states:

> *Consumers loathe spyware for several reasons, not the least of these is the potential for invasion of privacy and the appropriation of personal information surreptitiously by unscrupulous marketers. The pop-up ads that spyware generate are rarely popular among the computer users targeted for their attentions. However, **a more important issue is that spyware can interfere with the operation of computers, monopolizing CPU cycles and networking bandwidth.**[106] (emphasis added)*

88.   Of the six performance factors allegedly adversely affected by VisualDiscovery listed above, the overcharge Class Plaintiffs paid associated with the first four factors listed (CPU, memory, battery power, internet bandwidth) can be measured based on the market price consumers pay to obtain additional increments of these performance factors.

89.   For example, the overcharge Class Plaintiffs paid associated with CPU computing resources allegedly wrongly consumed by VisualDiscovery can be measured based on the market price consumers pay to obtain additional CPU computing resources for

---

[106] Stafford, T. and Urbaczewski, A. Spyware: The ghost in the machine. *Commun AIS 14*, (2004), 291–306.

comparable PCs (e.g., based on faster clock speeds and/or additional computing cores in the CPU). Similarly, the overcharge Class Plaintiffs paid associated with the RAM and hard drive memory resources allegedly wrongly consumed by VisualDiscovery can be measured based on the market price consumers pay to obtain additional RAM and hard drive memory for comparable PCs.[107]

90.   The market price consumers pay to obtain additional increments of a given performance factor represents a market-based, fair market valuation that can be used to estimate the cost Class Plaintiffs would have incurred in order to restore the performance of their Affected PCs to the performance they would have enjoyed absent the inclusion of VisualDiscovery. In this way, the market price consumers pay to obtain additional increments of a given performance factor—adjusted for the length of time Class Plaintiffs' Affected PCs were impacted by VisualDiscovery—represents a reliable proxy for the fair market value of the overcharge Class Plaintiffs paid related to the diminution in the performance of the Affected PCs.

5.2.3.1   *Restitution / Damages related to lost CPU computing resources*

91.   As mentioned above, Class Plaintiffs allege that the inclusion of VisualDiscovery consumed CPU computing resources. Academic studies have analyzed the relationship between the price of a CPU and its relative performance in order to measure the value associated with added (or lost) CPU performance. The results of one such study is reflected in Figure 9 below:

---

[107] To calculate the overcharge, the incremental cost consumers pay to obtain additional increments of a given performance factor would be adjusted to take into account the relevant time period during which Class Plaintiffs' Affected PCs were adversely impacted by VisualDiscovery.

Figure 9:   Comparison of CPU Price versus Performance[108]
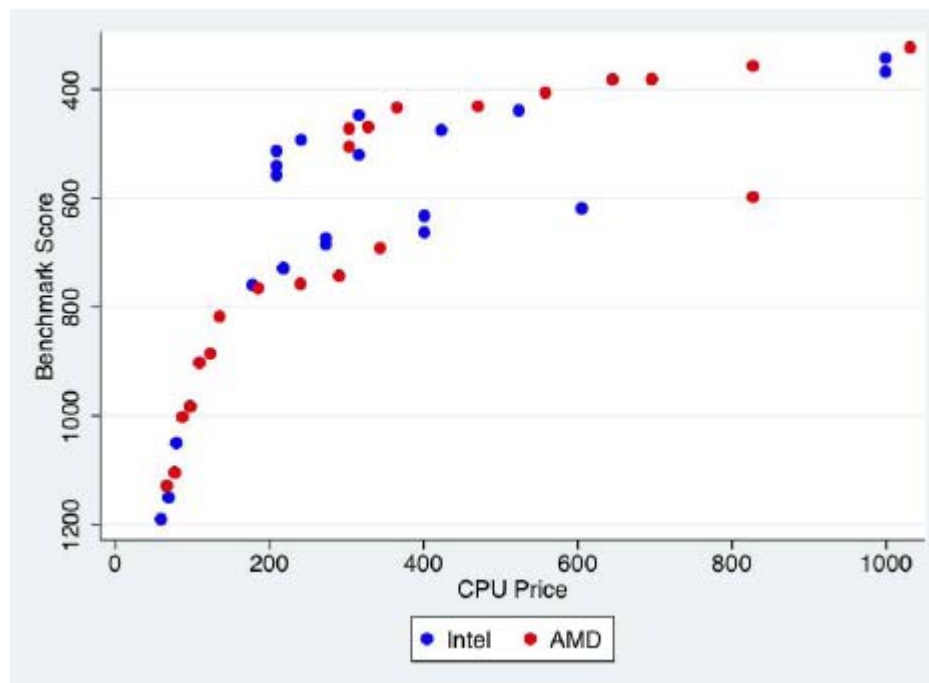
92.   The results of this study, as reflected in Figure 9, support the unremarkable finding that increases in CPU performance are generally accompanied by increases in CPU price.   Given this relationship between CPU price and performance, the overcharge Class Plaintiffs paid as a result of the diminished CPU performance due to VisualDiscovery can be measured based on (1) the price consumers pay to obtain additional CPU resources in the Affected PCs and (2) the amount of CPU resources in the Affected PCs wrongly consumed by VisualDiscovery.

93.   The market price consumers pay to obtain additional CPU computing resources for a Lenovo Ideapad 510s 14" laptop is calculated in Figure 10 below:

---

[108] Nosko, C. 2010.   Competition and Quality Choice in the CPU Market. Revise and Resubmit. *Quantitative Marketing and Economics* available at: http://faculty.chicagobooth.edu/workshops/ marketing/past/PDF/nosko_jmp.pdf.

Figure 10: Calculation of Market Price Consumers Pay for Additional CPU Computing Resources in Lenovo Ideapad 510s 14" Laptop[109]

Part Number	Lenovo Ideapad 510S 14" Silver Laptop		Upgrade Cost
	80TK002QUS	80TK002PUS	
Price	$749.99	$899.99	
Processor	6th Generation Intel® Core™ i5-6200U Processor (2.30GHz 2133MHz 3MB)	6th Generation Intel® Core™ i7-6500U Processor (2.50GHz 2133MHz 4MB)	$150.00
Graphics	AMD Radeon R7 M460 2GB	AMD Radeon R7 M460 2GB	
Memory	8.0GB DDR4 2133 MHz	8.0GB DDR4 2133 MHz	
Hard Drive	1TB 5400 RPM	1TB 5400 RPM	
Operating System	Windows 10 Home 64	Windows 10 Home 64	
Display	14.0" FHD IPS LED AntiGlare Backlight (1920x1080) with integrated camera	14.0" FHD IPS LED AntiGlare Backlight (1920x1080) with integrated camera	
Optical Drive	No Optical Disk Drive	No Optical Disk Drive	
Network card	Lenovo AC Wireless	Lenovo AC Wireless	
Bluetooth	Bluetooth Version 4.0	Bluetooth Version 4.0	
Warranty	One year	One year	
Pointing Device	ClickPad	ClickPad	
Battery	3 Cell 45 Watt Hour Li-Polymer	3 Cell 45 Watt Hour Li-Polymer	
Keyboard	Backlit English Keyboard	Backlit English Keyboard	

94.   In Figure 10 above, the pricing and components of two versions of a Lenovo Ideapad 510s 14" laptop advertised on Lenovo's website are compared. As shown in the figure, the only advertised difference between the two versions of the Ideapad 510s laptop is the processor (i.e., CPU)—all other listed components are the same.[110]   The price difference between the two versions is $150. Therefore, the market price consumers pay to upgrade to the higher performance processor (CPU) is $150.

---

[109] Lenovo, "Ideapad 510S – 14" Configurable Laptop, http://shop.lenovo.com/us/en/laptops/ideapad/500-series/510s-14-inch/, accessed July 20, 2016.

[110] The example given is for illustrative purposes only, to isolate the price paid for a given feature.

5.2.3.2 Restitution / Damages related to consumption of memory resources

95.   As mentioned above, Class Plaintiffs allege that the inclusion of VisualDiscovery consumed memory resources—both random access memory ("RAM") as well as hard disk space. As demonstrated above regarding lost CPU resources, the overcharge Class Plaintiffs paid as a result of memory resources consumed by VisualDiscovery can be measured based on (1) the price consumers pay to obtain additional RAM and (2) the amount of RAM memory wrongly consumed by VisualDiscovery.

96.   For example, the upgrade cost Lenovo customers pay to obtain additional RAM for a Lenovo Ideapad 710s 14" laptop is calculated in Figure 11 below:

Figure 11: Calculation of Market Price Consumers Pay for Additional RAM Memory in Lenovo Ideapad 710s 14" Laptop[111]

	Lenovo Ideapad 710S 13" Silver Laptop		
Part Number	80SW002NUS	80SW002MUS	Upgrade Cost
Price	$1,199.99	$1,399.99	
Processor	6th Generation Intel Core i7-6560U Processor (2.20GHz 1866MHz 4MB)	6th Generation Intel Core i7-6560U Processor (2.20GHz 1866MHz 4MB)	
Graphics	Intel® Iris™ Graphics 540	Intel® Iris™ Graphics 540	
Memory	8.0GB LPDDR3-1866 MHz	16.0GB LPDDR3-1866 MHz	$200.00
Hard Drive	512GB PCIe SSD	512GB PCIe SSD	
Operating System	Windows 10 Home 64	Windows 10 Home 64	
Display	13.3" FHD IPS AntiGlare LED Backlight (1920x1080)	13.3" FHD IPS AntiGlare LED Backlight (1920x1080)	
Optical Drive	No Optical Disk Drive	No Optical Disk Drive	
Network card	Lenovo AC Wireless (2x2)	Lenovo AC Wireless (2x2)	
Bluetooth	Bluetooth Version 4.0	Bluetooth Version 4.0	
Warranty	One year	One year	
Pointing Device	ClickPad	ClickPad	
Battery	4 Cell 46 Watt Hour Li-Cylindrical	4 Cell 46 Watt Hour Li-Cylindrical	
Keyboard	Backlit English Keyboard	Backlit English Keyboard	

97.   In Figure 11 above, the pricing and components of two versions of a Lenovo Ideapad 710s 14" laptop advertised on Lenovo's website are compared. As shown in the figure, the only advertised difference between the two versions is the processor (i.e., CPU)—all other listed components are the same.[112] The price difference between the two versions is $200.

---

[111] Lenovo, "Ideapad 710S – CuttingEdge Stylish Laptop, http://shop.lenovo.com/us/en/laptops/ideapad/700-series/710s/, accessed July 20, 2016.

[112] The example given is for illustrative purposes only, to isolate the price paid for a given feature.

Therefore, the market price consumers pay to obtain an additional eight gigabytes of RAM for this Lenovo laptop is $200, or $25 per gigabyte.

5.2.3.3   Restitution / Damages related to Internet Connection Bandwidth Consumed by VisualDiscovery

98.   Class Plaintiffs also allege that the inclusion of VisualDiscovery consumed internet connection bandwidth. As demonstrated above regarding lost CPU resources and consumption of memory resources, the overcharge Class Plaintiffs paid as a result of internet connection bandwidth consumed by VisualDiscovery can be measured based on (1) the price consumers pay to obtain additional increments of internet connection bandwidth and (2) the amount of internet connection bandwidth consumed by VisualDiscovery operating on Affected PCs.

99.   As an example, the price consumers pay to obtain additional increments of internet connection bandwidth can be calculated as follows:

Figure 12: Example Calculation of Cost per Additional Mbps of Internet Connection Bandwidth[113]

	Base Pricing		Change From Next Slower Speed		
	Speed	Price	Speed	Price	Price/Mbps
	Mbps	*per month*			
Comcast					
(a)	10	$39.99			
(a)	25	$49.99	15	$10.00	$0.67
(a)	75	$59.99	50	$10.00	**$0.20**
AT&T					
(b)	6	$20.00			
(b)	24	$40.00	18	$20.00	$1.11
(b)	45	$50.00	21	$10.00	$0.48
(b)	75	$60.00	30	$10.00	**$0.33**

---

[113] Comcast data obtained from http://www.xfinity.com/shop/xfinity-internetplus-west-alt?CMP=KNC-IQ_ID_sIW8gmqIy-VQ2-g-VQ6-61119114216-VQ16-c-pkw-comcastinternet-pmt-e-slid--tid-17589rb155979- on July 18, 2016. AT&T data obtained from http://www.attinternetservice.com/plans.html on July 18, 2016.

100.   Based on the homeowner internet packages offered by Comcast summarized in Figure 12 above, the lowest price Comcast charges for incremental internet connection bandwidth is $0.20 per Mbps. Similarly, the lowest price AT&T charges is $0.33 per Mbps.

101.   It is my understanding that the amount of internet connection bandwidth consumed by VisualDiscovery operating on Affected PCs could be determined based on analyses by technical experts.

5.2.3.4   Restitution / Damages related to Battery Power

102.   The common methodologies shown above regarding VisualDiscovery's consumption of CPU, RAM and internet bandwidth resources could also be used to measure the overcharge Class Plaintiffs paid related to VisualDiscovery's adverse impact on PC battery power. By measuring the average diminution in battery life caused by VisualDiscovery and the price consumers pay to obtain additional increments of battery life, it is possible to determine the overcharge Class Plaintiffs paid as a result of VisualDiscovery's adverse impact on PC battery power.

I declare under penalty of perjury that the foregoing is true and correct. Executed on July 22, 2016 in Mountain View, California.

_____

Bruce McFarlane

EXHIBIT 1

CURRICULUM VITAE
BRUCE L. McFARLANE

POSITION	Managing Director, LitiNomics (January 2007 to Present; CEO 1/07 - 8/11)
EDUCATION	B.A., Business Administration (Accounting), University of Washington (1984)
PROFESSIONAL AFFILIATIONS (current)	Certified Public Accountant (2/8/88 - 2/28/14, Inactive status effective 3/1/14) Certified Management Accountant

PROFESSIONAL AFFILIATIONS (past)	Member, Licensing Executive Society
	 Member, The Sedona Conference
	     Working Group 9 - Patent Damages and Remedies
	 Member, American Institute of Certified Public Accountants
	     Business Valuation and Litigation Services Section Member
	     Certified in Financial Forensics
	 Certified Management Consultant
	 Member, Oregon Society of Certified Public Accountants Litigation Services Committee
	 Member, Washington Society of CPAs Litigation Services Committee
	 Member, Institute of Management Consultants
	 Oregon Society of CPAs Litigation Services Committee (Chair, 1992; Vice Chair, 1991)
	 Chair, Oregon Society of CPAs Litigation Services Conference Committee (1991)
	 National Institute of Trial Advocacy, Faculty Expert Witness
	 Senior Consultant, CRA International
	 Member, Institute of Management Accountants
	 Member, California Society of CPAs
	     Litigation Section Member
	 Member, Intellectual Property Owners Association
	     Damages and Injunctions Committee member

RANGE OF EXPERIENCE	Experience includes testimony and consulting services in accounting, financial, economic and business issues related to commercial litigation and intellectual property related transactions.

PROFESSIONAL AND BUSINESS HISTORY	Independent Consultant February 2004–December 2006
	 InteCap, Inc. (Mountain View, California)
	     Managing Director, October 1999–February 2004
	 PHB Hagler Bailly, Inc. (Portland, Oregon; Palo Alto, California):
	     Principal, January 1996–September 1999
	     Associate, January 1993–December 1995
	 Price Waterhouse (Portland, Oregon):
	     Manager, July 1990–December 1992
	     Senior Consultant, July 1988–June 1990
	     Staff Consultant, November 1987–June 1988
	 Arthur Andersen (Portland, Oregon):
	     Staff Accountant, June 1986–October 1987
	 Peterson & Company (San Francisco, CA):
	     Staff Consultant, January 1985–May 1986

PUBLICATIONS	"The Sedona Conference Commentary on Patent Damages and Remedies," 2014 (contributing editor) Intellectual Property/Equipment," Litigation Support Report Writing, 2003 (co-authored with Lilian Quah). "10 Largest Trade Secrets Damages Awards" InteCap ReCap, Spring 2003 "10 Largest Patent Damages Awards" InteCap ReCap, Fall 2002

PUBLICATIONS **(continued)**	"Court Expands Lost Profits Damages From Patent Infringement," CPA Expert, Summer 1996 (co-authored with Michael J. Wagner). "The Implications of Changes in the Federal Rules of Civil Procedure for CPA—Expert Witnesses," The CPA Management Consultant, Newsletter of the AICPA Management Consultant Division (Spring 1994) (co-authored with Michael J. Wagner). "The Revised Federal Rules of Civil Procedures That Apply to Expert Witnesses," CPA Litigation Services Counselor, Volume 1994 Issues 2 3. Harcourt Brace (February and March 1994) (co-authored with Michael J. Wagner). "Opportunities in Litigation Services," Journal of Accountancy (June 1992) (co-authored with Michael J. Wagner). "The Role of the CPA in Commercial Litigation," The Oregon Certified Public Accountant (September 1991) (co-authored with Michael J. Wagner). "Using CPAs in Your Law Practice," The Seattle-King County Bar Bulletin (February 1991) (co-authored with Michael J. Wagner).
SPEECHES	"Anatomy of a Patent Damages Calculation" Morgan Lewis, Palo Alto, March 5, 2008 "Calculating & Proving Patent Damages" Law Seminars International, San Diego, January 20, 2004. "Valuation of Intellectual Property For Computer Related Technologies" Computer Law Association, Palo Alto, CA June 4, 2003. "Damages Strategies for Infringement of Intellectual Property Rights" Computer Law Association, Palo Alto, CA, May 14, 2003; Intellectual Property Society, Los Altos, CA, August 13, 2003. "Extracting Value from Your IP Litigation" Tomlinson, Zisko, Morosoli Maser's "Chautauqua" Series, Palo Alto, CA, September 25, 2002. "Perspectives on Value Extraction Models for Intellectual Capital Assets: Lessons Learned from the Trenches" The Intellectual Property Society, Santa Clara, CA, August 22, 2002. "Litigating Trade Secrets" Licensing Executive Society, 2002 Winter Conference, Las Vegas, NV, February 14, 2002. "Patent Damages 101: From Novice to Expert in Under Two Hours" Santa Clara University Law School, February 8, 2002. "Trade Secret Damages" Finnegan, Henderson, Farabow, Garrett & Dunner, July 12, 2001. "IP Valuation Issues in Litigation: Hot Topics," San Francisco Intellectual Property Lawyers Association, San Francisco, California, November 14, 2000; Gray Cary Ware Freidenrich, Palo Alto, California, February 1, 2001. "Case Studies in the Application of Regression Analysis," American Institute of CPAs Advanced Litigation Services Conference, Beverly Hills, California, October 17, 2000. "Quantifying Damages in Environmental Disaster Litigation," Oregon State Bar Convention, Seaside, Oregon, September 29, 1995. "Issues in Risk Rate Selection Regarding Prejudgment Interest Rates," California Society of CPAs' Litigation Advanced Forum, San Diego, April 28, 1995. "The Revised Federal Rules of Civil Procedure as They Apply to Expert Witnesses," various law firms in the Pacific Northwest, October 1993–March 1994. "Common Mistakes Made by Damage Experts," Oregon Trial Lawyers Association Annual Conference, Sun River, Oregon, August 12, 1993. "Damages Arising From Business and Commercial Claims," Oregon State Bar Continuing Legal Education Seminar, Portland, February 12, 1993. "Improving Expert Witness Effectiveness," 1992 OSCPA Litigation Services Conference, Portland, September 25, 1992. "Calculating a Reasonable Royalty," Price Waterhouse 1992 Litigation Managers Group Seminar, New Orleans, July 13–15, 1992. "Damages Including Loss of Earnings," 1991 OSCPA Litigation Support Services Conference, Portland, September 27, 1991. "Calculating a Reasonable Royalty," Price Waterhouse 1991 Litigation Managers Group Seminar, Denver, July 18–20, 1991.

	Type	Lawsuit	*	Testimony			Court	Law Firm	Work Performed
				Dep	T	Dec			
1	Alter Ego	Cadence Design Systems, Inc. v. IMI Telecommunications, Inc.	P	☐	☐	☐	U.S. District Court, Northern District of California; Case No. C 00-20430 JF/EAI (2001)	Cooley Godward/Melina Patterson	Analysis of financial factors applicable to doctrine of alter ego.
2	Alter Ego	Comdisco, Inc. v. SocialNet, Inc., Match-Net, Inc., et al.	P	☐	☐	☐	California Superior Court, Santa Clara County; Case No. CV 800 611 (2004)	Winston & Strawn	Alter ego analysis.
3	Antitrust	Atlas Electric, et al. v. National Association of Electrical Contractors	D	☐	☐	☐	U.S. District Court, Oregon (1993)	Lane Powell Spears Lubersky/Milo Petranovich	Damages analysis.
4	Antitrust	B&R Supermarket, et a. v. Visa, Inc., et al. [Class Action]	P	☐	☐	☐	U.S. District Court, Northern District of California, San Francisco Division; Case no. Case No. 3:16-cv-01150	Robbins Geller Rudman & Dowd / Alexandra Bernay, Carmen Medici	Calculate damages due to alleged conspiracy regarding EMV chip technology used in credit cards.
5	Antitrust	Dahl v. Bain Capital Partners, et al. [Class Action]	P	☐	☐	☐	U.S. District Court, District of Massachusetts; Lead Case No. 1:07-cv-12388-EFH	Scott + Scott / Chris Burke	Analysis of damages due to defendants' alleged monopsony of the LBO market.
6	Antitrust	Flying J, Inc. v. Comdata Network, Inc.	D	☐	☐	☐	U.S. District Court, District of Utah Northern Division; Civil No. 1:96CV0066K (2000)	Giauque, Crockett, Bendinger & Peterson/Gary Bendinger, John Bogart	Analysis of lost profits damages in the trucker fuel card industry due to Comdata's violations of antitrust laws.
7	Antitrust	In Re Aluminum Warehousing Antitrust Litigation [Class Action]	P	☐	☐	☐	U.S. District Court, Southern District of New York; Master Action No. 13-md-02481-KBF	Robbins, Geller, Rudman & Dowd / Bonny Sweeney, Carmen Medici	Analysis of damages issues related to defendants' alleged anticompetitive conduct related to aluminum warehousing.
8	Antitrust	In re Currency Conversion Fee Antitrust Litigation [Class Action]	P	☑	☐	☐	US District Court; Southern District of New York; MDL Docket No. 1409	Schrag & Baum/Tom Schrag; Steyer Lowenthal Boodrookas Alvarez & Smith/Allan Steyer; Lerach Coughlin Stioa & Robbins/Chris Burke	Respond to defendants' expert's analysis of defendant banks' net incremental cost to provide international credit card transactions.
9	Antitrust	In Re Foreign Exchange Benchmark Rates Antitrust Litigation [Class Action]	P	☐	☐	☐	U.S. District Court, Southern District of New York; Case No. 1:13-cv-07789-LGS	Scott + Scott / Chris Burke, Kristen Anderson	Calculate damages to class due to defendant banks' alleged collusion to fix foreign currency exchange rates.
10	Antitrust	In Re: Payment Card Interchange Fee and Merchant-Discount Antitrust Litigation [Class Action]	P	☑	☐	☐	U.S. District Court, Eastern District of New York; Case No. 1:05-md-1720-JG-JO	Berger & Montague / Merrill Davidoff, Michael Kane; Coughlin, Stoia, Geller, Rudman & Robbins / Chris Burke, Bonny Sweeney; Robins, Kaplan, Miller & Ciresi / Craig Wildfang.	Analysis of damages issues related to interchange fees charged merchants accepting Visa and MasterCard payment cards.
11	Antitrust	Knutson Towboat, Inc. v. Coos Bay Pilots Association	P	☑	☐	☐	U.S. District Court, Oregon (1988)	Ragen, Tremaine, Krieger, Schmeer & Neil/John McGrory, Fred Aibe	Market share analysis; calculate plaintiff's lost profits.

	Type	Lawsuit	*	Testimony			Court	Law Firm	Work Performed
				Dep	T	Dec			
12	Antitrust	Peace Northwest Corp. v. Merle West Medical Center	P	☐	☐	☐	U.S. District Court, Oregon (1988)	Perkins Coie/Michael Simon	Business valuation.
13	Antitrust	Peterson Industries, Inc. v. Goldman Sachs Group, Inc., et al. [Class Action]	P	☐	☐	☐	U.S. District Court, Southern District of New York; Case No. 1:13 cv 6689	Robbins Geller Rudman & Dowd LLP / Bonny Sweeney, Carmen Medici	Analyze data related to price fixing allegations concerning the aluminum market in the U.S.
14	Bad faith	Lorie Kuppenbender, et al. v. California State Automobile Association Interinsurance Bureau [Class Action]	P	☐	☐	☑	Superior Court, State of California, County of Sacramento; Case No. 07AS03197	Kershaw, Cutter, Ratinoff & York / Brooks Cutter; Dreyer, Babich, Buccola & Callaham / Steve Campora	Analysis of class damages due to CSAA's alleged failure to waive deductibles in accident claims involving uninsured motorists.
15	Bad faith	Patricia Vanderpool, et al. v. Allstate Insurance Company, et al. [Class Action]	P	☐	☐	☐	California Superior Court, Sacramento County; Case No. 02-AS01532	Kershaw, Cutter, Ratinoff & York / Brooks Cutter	Analysis of auto premium overcharges due to improper mileage rating.
16	Bankruptcy	Black v. Finkelstein	P	☐	☐	☐	U.S. Bankruptcy Court, Central District of California (1988)	Ball, Janik & Novack/Ken Novack	Forensic accounting.
17	Bankruptcy	Continental Casualty Insurance Co. v. Lincoln Property Management Co.	P	☐	☐	☐	Pre-litigation (1990)	Chapman & Cutler	Forensic accounting.
18	Bankruptcy	First Interstate Bank of Oregon v. Latitude Marines, Inc.	P	☐	☑	☐	U.S. Bankruptcy Court, Oregon (1988)	Stoel, Rives, Boley, Jones & Grey/Bennett Goldstein	Forensic accounting; calculation of earnings.
19	Bankruptcy	In re: Stayton SW Assisted Living, LLC [Class Action]	D	☐	☐	☑	U.S. District Court, Oregon; Case No. 09-cv-6082-HO	Ball Janik, LLP / Rick Stone, Tony Summers, Robert Taylor	Perform forensic accounting analysis.
20	Bid rigging	State of California v. Rosendin, et al.	P	☐	☐	☐	California Superior Court, Sacramento County (1992)	California State Attorney General/Tom Greene	Statistical analysis of bid data regarding electrical construction contracts.
21	Bid rigging	State of California v. Sherwin, et al.	P	☐	☐	☐	Sacramento County Superior Court; Case No. 95F00913 (1997)	California State Attorney General/Molly Alden	Statistical analysis of bid data regarding contracts to provide food services to state prisons.
22	Breach of contract	3CX, Inc. v. Global Strategic Investment, Inc.	P	☐	☐	☐	Pre-litigation	Werner & Burke/Ryan Werner	Determine value of 3CX shares pursuant to buy-out provision in shareholder agreement.
23	Breach of contract	A.P.J. Associates, Inc. v. North American Philips Corporation and Signetics Company	D	☐	☐	☐	U.S. District Court, Eastern District of Michigan; Case No. 98-74911	Banchero & Associates/Jeff Banchero	Determine compensation due plaintiff in connection with defendants' sales of microprocessors.
24	Breach of Contract	Advanced Business Telecommunications v. Pac Bell	D	☐	☐	☐	U.S. District Court, Central District of California (1993)	Orrick Herrington/Tom Gray	Respond to plaintiff's analysis of lost profits.
25	Breach of Contract	Ammari Electronics, et al., v. SBC Pacific Bell Directory, et al. [Class Action]	P	☑	☑	☐	California Superior Court, Alameda County; Case No. RG-05198014	Meade & Schrag / Tyler Meade, Michael Schrag; Gillin Jacobson Ellis & Larsen / Luke Ellis.	Prepare calculation of plaintiff-merchants' damages due to defendant's alleged failure to fulfill obligation to distribute yellow page directories.

	Type	Lawsuit	*	Testimony Dep	T	Dec	Court	Law Firm	Work Performed
26	Breach of contract	Axiom Investment Advisors, LLC v. Barclays Bank PLC, et al. [Class Action]	P	☐	☐	☐	U.S. District Court, Southern District of New York; Case no. Case No. 1:15-cv-09323	Scott + Scott / Chris Burke, Kristen Anderson	Calculate damages due to defendants' alleged wrongful use of "last look" in currency trades.
27	Breach of Contract	Bank One, Oklahoma, N.A. et al. v. Trammell Crow Services, Inc., et al.	D	☐	☐	☐	U.S. District Court, Northern District of Illinois, Eastern Division; Case No. 03 C 3624	Jenner & Block / David Sanders	Analysis of Bank One's damages due to alleged errors contained in Trammel Crow's financial analysis of a real estate investment.
28	Breach of contract	Brown v. Pacific Northwest Bell	D	☐	☑	☐	American Arbitration Association (1988)	Schwabe, Williamson & Wyatt/Jay Waldron	Calculate plaintiff's damages due to breach of contract involving error in yellow page advertising.
29	Breach of contract	Children's Hospital & Regional Medical Center v. Eclipsys Corporation	D	☐	☐	☐	Superior Court of Washington For King County; Case No. 02-02-02361-1SEA (2003)	Richard Johnston, Lisa Cameron/Hale & Dorr	Determine plaintiff's damages due to defendant's alleged breach of contract to install a Clinical Information System at plaintiff's hospital.
30	Breach of contract	CIAL v. Venture Imaging	D	☐	☐	☐	Oregon Circuit Court, Multnomah County (1988)	Perkins Coie/Michael Simon	Damages analysis.
31	Breach of contract	Cleghorn Bar Enterprises, et al. v. Museum Parc Partners, L.P., et al.	P	☐	☑	☐	Arbitration; Case No. 74 180 00754 (San Francisco, 2002)	Banchero & Associates/Jeff Banchero, Nance Becker	Forensic accounting. Analysis of amounts due limited partners in San Francisco retail space limited partnership.
32	Breach of contract	Computer Business Applications, Inc. v. Computer Development, Inc.	P	☐	☐	☐	U.S. District Court, Central District of California (1994)	Perkins Coie/Doug Thorpe, Dan Johnson	Valuation of intellectual property.
33	Breach of contract	Convergence Associates v. NaviSite, Inc.	P	☑	☑	☐	Arbitration; JAMS Case No. 1100040436	Russo & Hale/Jack Russo, Tim Hale, Mike Risch	Determine Convergence's earnout revenues absent NaviSite's alleged breach of purchase agreement.
34	Breach of contract	David McDonald v. Silicon Valley Expert Witness Group, et al.	D	☑	☐	☐	Superior Court of California; Santa Clara County; Case No. CV 809 162	Russo & Hale/Jack Russo, Tim Hale, Mike Risch	Calculation of share value per terms of shareholder agreement.
35	Breach of contract	Deutsch Technology Research v. OrCAD, Inc.	D	☐	☐	☐	American Arbitration Association; Case No. 74 Y 117 01319 98 (1998)	Ater Wynne/Steve Blackhurst	Rebut plaintiff's damages analysis regarding breach of software distribution agreement.
36	Breach of contract	DP-TEK Development Company v. Integrated Device Technology, Inc.	P	☐	☐	☐	U.S. District Court, District of Kansas; Case No. 97-1541-JTM (1998)	Gibson, Dunn & Crutcher/Charles Ivie	Calculate plaintiff's damages resulting from defendant's breach of contract re software development.
37	Breach of contract	Eastman Kodak Company v. Calcomp Technology, Inc., et al.	D	☐	☐	☐	Superior Court of California; County of Orange (2000)	Irell & Manella/Ken Heitz	Determine plaintiff's damages due to defendant's failure to develop inkjet printer technology.

	Type	Lawsuit	*	Testimony Dep	T	Dec	Court	Law Firm	Work Performed
38	Breach of contract	F. M. Nicholas Co., Inc. v. AMP, Inc.	P	☐	☐	☐	U.S. District Court, Northern District of California; Case No. C 00 2731 MEJ (2000)	Banchero & Associates/Jeff Banchero	Analysis of plaintiff's damages due to defendant's breach of distributor agreement.
39	Breach of contract	fourthchannel, inc. v. Pivotal Corporation	D	☐	☐	☐	American Arbitration Association; Case No. 50 T 133 00200 (2001)	Dorsey & Whitney/Peter Sipkins	Analysis of plaintiff's damages due to defendant's breach of software development and license agreement re internet commerce software.
40	Breach of contract	Fred Meyer v. A.T. Kearney	D	☐	☐	☐	Oregon Circuit Court, Multnomah County (1992)	Bullivant, Houser, Baily Pendergrass & Hoffman/ Doug Houser, Dan Lindahl	Damages analysis related to failed computer system installation.
41	Breach of contract	Glass & Associates v. Factory Mutual Insurance Company	P	☐	☐	☐	U.S. District Court, District of Oregon; Civil No. 99-6105-HO (2000)	Ball Jan k/Rick Stone	Determine damages to plaintiff's plywood mill due to insurance company's bad faith in settlement of business interruption claim.
42	Breach of contract	Green Hills Software, Inc. v. Integrated Software, Inc.	P	☐	☐	☐	Arbitration; Case No. 72 117 01213 97	Munger Tolles & Olson/Greg Stone, Kelly Klaus	Calculate plaintiff's damages resulting from defendant's breach of software license agreement.
43	Breach of Contract	Hifn, Inc. v. Intel Corporation	P	☑	☐	☐	Superior Court for the State of Delaware, County of New Castle. Case No. 05C-06-052-PLA	Tom Moore Law Group / Tom Moore	Calculate damages due to Intel's breach of technology license and purchase agreement.
44	Breach of contract	Honey Baked Ham, Inc., et al. v. Pilgrim's Pride Corporation	P	☐	☐	☐	U.S. District Court, Central District of California (Santa Ana); Case No. SACV 04-01158	Peterson, Weyand & Martin / Kurt Peterson	Calculation of lost profits due to Pilgrim's failure to timely deliver food products.
45	Breach of contract	Honey Baked Hams, Inc. v. Towne, Inc.	P	☐	☐	☐	Superior Court of the State of California, County of Orange (2002)	Peterson Weyand & Martin/Kurt Peterson	Determine Honey Baked Hams' damages due to printing of incorrect telephone number in mailing catalog.
46	Breach of Contract	Ion Beam Applications, Inc. v. Outrigger Systems, Inc., et al.	D	☐	☐	☐	California Superior Court, Santa Clara County; Case No. 1-03-CV-006620	Orrick Herrington & Sutcliffe/Matt Poppe	Analysis of balance due on promissory notes.
47	Breach of contract	Jeffrey Christie v. Bank of America, et al. [Class Action]	P	☐	☐	☑	U.S. District Court, Middle District of Florida; Case No. 8:13-cv-01371-JDW-TBM	Zebersky | Payne / Todd Payne	Analysis of damages due to Bank of America's failure to credit borrows with proceeds from claims filed under force placed insurance policies.
48	Breach of Contract	Joseph Ruwe, et al. v. Cellco Partnership d/b/a/ Verizon Wireless [Class Action]	P	☑	☐	☑	U.S. District Court, Northern District of California, San Francisco Division; Case No. 07-cv-03679 JSW	Hagens, Berman, Sobol, Shapiro, LLP / Jeff Friedman; Chavez & Gertlier LLP / Nance Becker; Law Offices of Peter B. Fredman / Peter Fredman	Analyze Verizon's practice of charging late fees to customers who pay late.

	Type	Lawsuit	*	Testimony			Court	Law Firm	Work Performed
				Dep	T	Dec			
49	Breach of contract	Kaiser Aerospace & Electronics v. Teledyne Industries	P	☑	☐	☐	11th Judicial Circuit Miami - Dade County, Florida; Civil Action No. 95-05288-CA-15 (2001)	Weil Gotshal & Manges/Ed Soto, Oscar Cantu, Gina Dombosch	Determine damages due to defendant's breach of contract to jointly acquire Piper Aircraft Corporation's assets out of bankruptcy. Business valuation.
50	Breach of contract	Legacy Health Hospitals v. Aramark Corporation	P	☐	☐	☐	Oregon Circuit Court, Multnomah County (1999)	Ball Janik/Rick Stone, Bruce Conn	Determine damages to Legacy Health Hospitals resulting from Aramark's breach of Management Services Agreement.
51	Breach of contract	Loranzo-Gurley, Inc., et al. v. Northfield Insurance Company, et al.	P	☑	☐	☐	California Superior Court, Santa Clara County, Case No. 106CV0577706	Kastner Banchero / Jeff Banchero	Analysis of plaintiff's damages due to defendant's failure to tender defense of a claim submitted by plaintiff / policy holder.
52	Breach of Contract	Lucey, et al. v. Prudential Insurance Company of America [Class Action]	P	☑	☐	☑	U.S. District Court, District of Massachusetts, Western Division; Case No. 3:10-CV-30163-MAP	Scott & Scott / Chris Burke; Kerr & Wagstaffe / Michael von Loewenfeldt	Analysis of class damages due to Prudential's alleged breach of contract related to payment of life insurance policy benefits for U.S. military service personnel.
53	Breach of contract	Lussier Subaru, et al v. Subaru of New England, Inc., et al. [Class Action]	P	☐	☐	☐	U.S. District Court, District of New Hampshire; Case No. C-99-109-B (2000)	Kronick, Moskovitz, Tiedemann & Girard/Bill Kershaw; Wiggin & Nourie/Rich McNamara	Determine damages to class of Subaru dealers due to over accessorization of cars.
54	Breach of contract	Manfredi Lacoste v. Oracle Corporation	D	☐	☐	☐	Buenos Aires, Argentina	Baker & McKenzie / Ben Ho	Analysis of damages due to Seibel Systems' (acquired by Oracle) alleged breach of employment contract by failure to pay commissions due.
55	Breach of contract	Market Transport, Inc. v. Wackenhut Corp.	P	☐	☐	☐	Oregon Circuit Court, Multnomah County (1990)	Markowitz, Herbold, Stafford & Glade/Burt Stafford	Damages/business interruption analysis.
56	Breach of contract	Micky Novak v. Seiko Corp., et al.	P	☐	☐	☐	U.S. District Court, Oregon; Case No. CV 99 1022 RE (2000)	Elliott & Park/Dennis Elliott	Determine reasonable compensation for plaintiffs role regarding defendants' sales of sport watches to Nike.
57	Breach of contract	Moving Media, Inc. v. Speck Cab Company.	P	☐	☑	☐	Superior Court of California, County of San Francisco; Case No. 978740 (2001)	Werner & Burke/Ryan Werner	Analysis of damages due to defendant's breach of advertising contract.
58	Breach of Contract	NeWire, Inc. v. Southwire Company	D	☑	☐	☐	Chancery Court, State of Tennessee, 18th Judicial District at Sumner County; Case No. 2011C-21	Paul Hastings / William Whitner, Eric Stolz, Rachel Saloom	Analysis of damages related to Southwire's alleged failure to use best efforts to commercialize flatwire technology.
59	Breach of contract	Oregon Metallurgical Corp. v. Burlington Northern & Santa Fe Railway Company, CSX Transportation Company	P	☑	☑	☐	US District Court, District of Oregon; Case No. 01-1052-HA (2001)	Lane Powell Spears Lubersky/Met Wilson, Milo Petranovich	Analysis of damages due to late railcar deliveries of raw material used in manufacture of titanium sponge.

	Type	Lawsuit	*	Testimony			Court	Law Firm	Work Performed
				Dep	T	Dec			
60	Breach of contract	Or-kav Solutions Ltd. v. Altium, Ltd	D	☐	☑	☐	Amierican Arbitration Association; Case No. 74 117 Y 00165 12 nolg	Hale & Associates / Tim Hale; Computerlaw Group / Jack Russo.	Analysis of Or-Kav's damages due to Altium's alleged breach of Value Added Reseller agreement regarding distribution of electronic design automation (EDA) software in Israel.
61	Breach of contract	Ostex International, Inc. v. Boehringer Mannheim	P	☐	☐	☐	American Arbitration Association; Case No. 79T184 00192 95 (1996)	Mundt, MacGregor, Happel, Falconer, Zulauf & Hall/Jay Zulauf	Determine damages due to defendant's breach of contact to promote plaintiff's osteoporosis testing technology.
62	Breach of contract	PC Designs, Inc. v. GN Hello Direct	P	☐	☐	☐	Arbitration (Florida)	Andrews & Galatis / Ted Galatis	Determine additional royalties due per license agreement.
63	Breach of contract	Polo Ralph Lauren L.P. v. The Magnin Company, Inc.	D	☐	☐	☐	American Arbitration Association (1997)	Browne & Woods/Eddie Woods	Determine damages due to defendant's breach of franchise agreement by not allowing plaintiff to open a Polo Ralph Lauren store at LAX International Airport.
64	Breach of contract	Prestige Card, Inc. v. Bank One, et al.	D	☐	☑	☐	Arbitration (1998)	Lane Powell Spears Lubersky/Met Wilson	Analysis of lost profits due to defendant's breach of contract to develop affinity credit card program.
65	Breach of contract	Pyramed, Inc. v. Caremark, Inc.	D	☐	☐	☐	American Arbitration Association (1989)	Spears, Lubersky, Bledsoe, Anderson, Young & Hilliard/Bob Maloney	Damages analysis.
66	Breach of contract	Raikow v. Frontier Jeep Eagle	D	☐	☑	☐	Arbitration (1991)	Betts, Patterson & Mines/James Nelson, Lori Guzzo; Stoll, Stoll, Berne & Lokting/Rob Shlachter	Forensic accounting; determine profit earned by auto dealership.
67	Breach of Contract	Retail Distributor v. Wholesale Manufacturer (disclosure of parties precluded by settlement agreement)	P	☐	☐	☐	Disclosure precluded by settlement agreement	Hennlley & Grossfeld / Orlando Cabanday, Ryan Jike	Analysis of plaintiff's lost profits due to alleged breach of contract regarding allocation of product among retail distributors.
68	Breach of contract	Sedona Corporation v. Open Solutions, Inc.	P	☑	☐	☐	U.S. District Court, District of Connecticut; Civil Action No. 3:07CV171 (MRK)	Schiff Hardin / Gary Grossman, Paul Schuck	Calculate royalties due plaintiff due to defendant's alleged breach of software license agreement.
69	Breach of contract	Seer Systems, Inc. v. Creative Technology, Ltd.	P	☐	☐	☐	Superior Court of California, County of Santa Clara, Case No. CV 793916	Peterson Weyand & Martin/Alex Weyand	Determine lost profits due to defendant's breach of technology licensing agreement.
70	Breach of contract	Seymon v. EASI, Inc., et al.	P	☐	☑	☐	Superior Court of California, County of San Joaquin; Case No. CV010303 (2001)	Chadeayne, Burns & Leachman/Ron Leachman	Valuation of goodwill value of EASI, Inc.
71	Breach of contract	SMS Automotive v. Allied Signal	D	☐	☐	☐	U.S. District Court, Pennsylvania (1992)	Duane, Morris & Hecksher	Damages analysis/ business valuation.

	Type	Lawsuit	*	Testimony			Court	Law Firm	Work Performed
				Dep	T	Dec			
72	Breach of contract	Tarkington, O'Connor & O'Neill v. Fireman's Fund Insurance Companies	D	☐	☐	☐	California Superior Court; County of San Francisco; Case No. 958950 (1996)	Rice, Fowler, Booth & Banning/Kurt Micklow	Analysis of factors contributing to plaintiff's financial decline.
73	Breach of Contract	The Doan, Paul Endrest v. State Farm General Insurance Company [Class Action]	P	☑	☑	☐	Superior Court, State of California, County of Santa Clara; Case No. 108CV129264	Kershaw, Cutter & Ratinoff, LLP / Brooks Cutter, JR Parker	Analysis of depreciation used for purposes of settlement of home owner insurance policy claims.
74	Breach of contract	TRW, Inc. v. Talley Industries, Inc., et al.	D	☐	☐	☐	U.S. District Court, District of Arizona; Civil Action 94-0350-PHX-PGR (1995)	Donovan, Leisure, Newton & Irving/Jeff Conciatori	Calculate defendant's damages resulting from plaintiff's breach of contract regarding sales of air bag technology.
75	Breach of contract	Ultratech Stepper v. Dynamic Automated	P	☐	☐	☐	Arbitration (San Francisco; 2001)	Russo & Hale/John Kelley, Mike Risch	Determine plaintiff's damages due to defendant's breach of contract to develop high speed material handler used in semiconductor manufacturing.
76	Breach of contract	United Computer Systems, Inc. v. AT&T	D	☐	☐	☐	American Arbitration Association; No. 72 117 1362 91 (1998)	Orrick Herrington & Sutcliff/Bob Freitas	Rebut plaintiff's lost profits damages analysis re breach of software development contract.
77	Breach of contract	Wolfgang Brox v. Andreas Peneder	P	☐	☑	☐	California Superior Court, County of Napa; Case No. 26-25972	Kastner Banchero / Jeff Banchero	Determine damages from operation and sale of partnership that owned The Candlelight Inn in Napa, CA.
78	Breach of contract	Workshare Technology, Inc. v. Litera Corporation	P	☐	☐	☐	American Arbitration Association; Case No. 74-117-00863-08	Perkins Coie / Michael Baily, Chris Coleman	Determine lost profits Workshare suffered due to Litera's alleged breach of settlement agreement regarding Workshare's copyrights used in document comparison software.
79	Breach of contract	WSI v. Port of Portland	P	☐	☐	☐	Oregon Circuit Court, Multnomah County (1991)	Bogle & Gates/Dave Canary	Determine damages due to defendant's breach of contract to repair dry dock ship repair facilities.
80	Breach of contract, bad faith	insureon.com v. Philadelphia Indemnity Insurance Company, et al.	P	☑	☐	☐	Superior Court of California, County of Alameda (2002)	Werner & Burke/Ryan Werner, Joe Burke	Analysis of damages due to defendants failure to fund defense of trademark infringement suit filed against Insureon.
81	Breach of contract, breach of fiduciary duty	LASVN#2, et. al. v. Vann Ness and Sperry, et. al.	P	☐	☐	☐	Los Angeles Superior Court, California; Case No. BC 206251 (2002)	Krane & Smith/Marc Smith	Determine plaintiff's damages due to wrongful termination of commercial real estate brokerage.
82	Breach of fiduciary duty	Ainslie, et al. v. First Interstate Bank of Oregon	D	☐	☐	☐	Oregon Circuit Court, Multnomah County (1993)	Lane Powell Spears Lubersky/Met Wilson	Analysis of defendant's compliance with terms of escrow agreement.
83	Breach of fiduciary duty	Huntington Bank, Inc. v. Gilchrist Timber Company	D	☐	☐	☐	U.S. District Court, Oregon; (1993)	Ater, Wynn, Hewitt, Dodson & Skerritt/Steve Blackhurst	Financial analysis. Business valuation.

	Type	Lawsuit	*	Testimony Dep	T	Dec	Court	Law Firm	Work Performed
84	Breach of fiduciary duty	Ingersoll-Rand Financial Corp. v. First Interstate Bank of Oregon	D	☐	☐	☐	U.S. District Court, Oregon (1993)	Lane Powell Spears Lubersky/Met Wilson, Tim Harmon	Analysis of defendant's compliance with terms of escrow agreement.
85	Breach of fiduciary duty	Oregon Dental Association v. United States National Bank	P	☐	☐	☐	U.S. District Court, Oregon (1988)	Perkins Coie/Michael Simon	Jury award distribution analysis.
86	Breach of fiduciary duty	Stephen Friedman v. Appaloosa Interactive Corporation; Andras Csaszar, Sega Enterprises USA, Bonus.com	D	☑	☑	☑	Superior Court of California, Santa Clara County; Case No. 1-05-CV-050715	Baker & McKenzie / Tod Gamlen, Keith Wurster	Rebuttal of plaintiff's business valuation damages analysis.
87	Breach of fiduciary duty	Supra Corporation v. D.L. Horton Enterprises, Inc.	P	☐	☐	☐	Superior Court of California, County of Los Angeles; Case No. BC 093085 (1995)	Stradling, Yocca, Carlson & Rauth/Julie McCoy Akins	Calculate plaintiff's lost profits due to business interruption.
88	Breach of franchise agreement	Bernhart v. Johnson	P	☐	☐	☐	Washington State Superior Court, King County (1994)	Preston, Gates & Ellis/Carol Arnold	Calculate damages due to alleged wrongful termination of real estate franchise agreement
89	Breach of trust	The Commissioner of Insurance of the State of Michigan v. Harris Trust and Savings Bank, et al.	D	☐	☐	☐	Michigan Circuit Court, Ingham County (1996)	Winston & Strawn/Mark Rotert, Carloyn McNiven	Transactional analysis of trust account activity; damages analysis.
90	Breach of warranty	Emerson Radio Corp. v. G&C Distributing	P	☑	☐	☐	American Arbitration Association (1988)	Ball, Janik & Novack/Ken Novack	Analysis of defendant's sales, calculate lost profits.
91	Breach of warranty	General Chemical v. Nisshin Gulf Coast, Inc.	P	☐	☐	☐	California Superior Court, County of San Francisco; Case No. 306072 (2000)	Banchero & Associates/Jeff Banchero, Nance Becker	Calculate plaintiff's damages caused by failure of defendant's equipment used in the manufacture of high purity sulfuric acids.
92	Breach of warranty	I. B. Fischer v. Foodmaker, Inc.	P	☐	☐	☐	N/A (1993)	Milbank, Tweed, Hadley & McCloy/Rick Stone, Betsy Lear	Determine damages due to defendant's provision of e coli tainted meat to Jack In The Box franchisee.
93	Breach of warranty	Lewis River Golf Course v. Scott Seed Company, Inc.	D	☐	☐	☐	U.S. District Court, Western District of Washington (1988)	Schwabe, Williamson & Wyatt/Donald Joe Willis	Determine damages due to defendant's provision of incorrect grass seed.
94	Breach of warranty	LHS Communications Systems, Inc. v. Pacific Bell Mobile Services.	D	☑	☑	☐	Arbitration; Case No. 30 Y 181 00786 99 (San Francisco, 2001)	Orrick, Herrington & Sutcliffe/Matt Poppe, Chris Ottenweller	Prepare counterclaim damages analysis regarding failure of plaintiff's billing software program.
95	Breach of warranty	Virtual Silicon Technology, Inc. v. Library Technologies, Inc.	P	☐	☐	☐	American Arbitration Association (San Francisco, 2003)	Russo & Hale/Tim Hale, John Kelley, Mike Risch	Analysis of damages due to alleged deficiencies in defendant's standard cell library software.
96	Business devastation	Ball, Ball, Brosamer, Inc. v. Myles Lorentz, Inc.	P	☐	☐	☐	District Court, City and County of Denver, Colorado; Civil Action #93 CV 1234 (1995)	Holland & Hart/Robert Benson, Ian Karpel	Analysis of factors contributing to defendant's bankruptcy.

	Type	Lawsuit	*	Testimony Dep	Testimony T	Testimony Dec	Court	Law Firm	Work Performed
97	California Business & Professions Code § 17200	Adam Schwartz v. VISA International Corp., MasterCard International, Inc. et al. [Class Action]	P	☑	☑	☐	Superior Court of California, County of Alameda; Case No. 822404-4 (2001)	Schrag & Baum/Tom Schrag; Steyer Lowenthal Boodrookas Alvarez & Smith/Allan Steyer; Millberg Weiss/Chris Burke	Prepare cost and profitability analysis of multicurrency conversion settlement system.
98	Complaint for Indemnity	Cleghorn Bar Enterprises, et al. v. Garlock, et al.	P	☐	☑	☐	California Superior Court, County of San Francisco; Case No. CGC 04-432322 (2005)	Kastner Banchero / Jeff Banchero	Forensic accounting analysis. Determine amounts owing plaintiffs.
99	Copyright Infringement	Oracle America, Inc. v. Terix Computer Company, Inc.	D	☐	☐	☐	U.S. District Court, Northern District of California, Case No CV 13 3385	Hopkins & Carley / John Picone, Jennifer Coleman, Cary Chien	Analysis of damages regarding defendant's alleged copyright infringement of Oracle software.
100	Copyright infringement	Yield Dynamics v. Macrovision, et al.	P	☐	☐	☐	United States District Court, Northern District of California (2003)	Russo & Hale / Tim Hale	Analysis of plaintiff's damages due to defendants alleged use of plaintiff's software code.
101	Dealer termination	Bayshore Ford Truck Sales, Inc. et al. v. Ford Motor Company [Class Action]	P	☐	☐	☐	U.S. District Court, District of New Jersey; Case No. 99 cv 741 (JCL)	Kronick, Moskovitz, Tiedemann & Girard/Bill Kershaw, Lyle Cook, Jonathan Renner	Calculate damages for class of truck dealers regarding Ford's sale of its heavy duty truck business to Freightliner.
102	Dealer termination	Blount v. Oregon Tractor	D	☐	☐	☐	Oregon Circuit Court, Multnomah County (1992)	Perkins Coie/Chris Angius	Determine damages due to plaintiff's alleged wrongful termination of franchise agreement.
103	Dealer termination	Lusk v. Jiffy Lube	D	☐	☐	☐	California Superior Court, Sacramento County (1992)	Porter, Scott, Weibert & Delehart	Analysis of plaintiff's damages due to termination of franchise agreement.
104	Dealer termination	Meyers v. UNOCAL	P	☐	☐	☐	U.S. District Court, Oregon (1991)	James, Denecke & Harris/Roger Harris	Analysis of plaintiff's damages due to termination of franchise agreement. Business valuation.
105	Dealer termination	The Communications Group v. GTE Mobilnet	D	☐	☐	☐	Oregon Circuit Court, Multnomah County (1992)	Lane Powell Spears Lubersky/Met Wilson, George Kirkland	Analysis of plaintiff's damages due to termination of franchise agreement.
106	Dissenting minority shareholder	Benchmark Designs of California v. D.W. Industries, Inc., et al.	P	☐	☐	☐	Oregon Circuit Court, Multnomah County; Case No. 9408-05328 (1995)	Larry Sokol & Associates/ Larry Sokol	Valuation of minority shareholder interest.
107	Eminent domain	State of California v. Bio-Rad	D	☐	☐	☐	Alameda Superior Court, California (1992)	Law offices of James Whitaker/Jim Whitaker	Determine damages resulting from state of California seizing defendant's land through eminent domain in connection with construction of highway.
108	Environmental contamination	General Electric	P	☐	☐	☐	N/A (1995)	GE in-house counsel	Estimate costs to remediate contaminated sites.

	Type	Lawsuit	*	Dep	T	Dec	Court	Law Firm	Work Performed
				Testimony					
109	Environmental contamination	Lowe's Home Centers, Inc. v. General Electric Company	D	☐	☐	☐	U.S. District Court, Northern District of Georgia; Case No. 4:98-CV-0028-HLM (2000)	Williams & Connolly/Steve Kuney, Bob Shaughnessy	Rebut plaintiff's lost profits damages analysis regarding lost opportunity to open a Lowes superstore in Rome, GA.
110	False advertising / Lanham Act	NEC Technologies v. Samsung	P	☐	☐	☐	U.S. District Court, Northern District of Illinois (2001)	Bates & Carey/Richard Nicolaides	Analysis of plaintiff's damages due to defendant's false advertisements re flat panel pc monitors.
111	Fifth Amendment Takings	Michael Etchegoinberry, et al. v. The United States	P	☐	☐	☐	U.S. Court of Federal Claims; Case No. 11-564C	Kershaw Cutter and Ratinoff / Bill Kershaw	Analysis of proposed settlement.
112	Fraud	Callaway v. Mercedes Benz USA, LLC, et al. [Class Action]	P	☑	☐	☑	U.S. District Court, Northern District of California; Case no. Case No. 8:14-cv-02011 JVS (DFMx)	Eagan Avenatti, LLP / Scott Sims, Jason Frank	Calculate damages due class due to defendant's failure to disclose defect in seat heaters.
113	Fraud	Damerow Ford v. Prebble	P	☐	☐	☐	Oregon Circuit Court, Multnomah County (1989)	Schwabe, Williamson & Wyatt/Tom Dulcich, Peter Ozanne	Forensic accounting. Investigation of possible fraud by operating partner of auto dealership.
114	Fraud	Eulrich v. Snap-On Tools Corp.	D	☐	☐	☐	Oregon Circuit Court, Linn County (1990)	Spears, Lubersky, Bledsoe, Anderson, Young & Hilliard/Milo Petranovich	Determine damages due to defendant's alleged wrongful termination of franchise agreement.
115	Fraud	First Interstate Bank of Oregon v. C&B Livestock, Inc.	P	☐	☐	☐	N/A (1991)	Weiss, Jensen, Ellis & Botteri/Charlie Starkey	Forensic accounting. Analysis of defendant's financial reporting.
116	Fraud	Hammersmith v. Taco Bell Corp.	D	☐	☐	☐	U.S. District Court, Oregon (1990)	Skadden, Arps, Slate, Meagher & Flom	Determine damages due to defendant's alleged wrongful termination of franchise agreement.
117	Fraud	In Re Lenovo Adward Litigation [Class Action]	P	☐	☐	☐	U.S. District Court, Northern District of California, San Jose Division; Case no. 5:15-md-02624-RMW	Girard Gibbs / Elizabeth Kramer; Cotchett, Pitre & McCarthy / Matt Edling.	Calculate damages due class due to inclusion of adware / spyware in Lenovo laptops.
118	Fraud	PG&E v. Satrap	P	☐	☐	☐	Pre-litigation (1989)	PG&E's Internal Audit Department	Forensic accounting. Analysis of terms of natural gas contracts PG&E entered into with gas suppliers.
119	Fraud	Pioneer Liquidating Corporation v. San Diego Trust & Savings Bank, et al.	D	☐	☐	☐	United States District Court, Southern District of California; Case No. 94-361 (1995)	Post, Kirby, Noonan & Sweat/David Noonan, Steve Sanchez	Analysis of check kiting scheme. Analyze and respond to plaintiff's damages theories and calculations.
120	Fraud	Sharon Scofield, et al. v. Hammer Lane RV and Mini Storage LP, et al.	P	☐	☐	☐	Superior Court of California, County of Sacramento; Case No. 34-2012-00124071	Peterson Martin and Reynolds / Kurt Peterson	Forensic accounting analysis of mini-storage limited partnership property. Calculate damages.

	Type	Lawsuit	*	Testimony			Court	Law Firm	Work Performed
				Dep	T	Dec			
121	Fraud	Shuxin Li v. EFT Holdings, Inc. [Class Action]	P	☑	☐	☑	US District Court, Central District of California; Case No. 2:15-CV-00727-DSF-CWx	Locke Lord / John Hulihan; Howarth & Smith / Don Howarth, Paddy Glaspy, Jess Walsh	Analysis of class damages due to defendant's sales of products and memberships through endless chain scheme.
122	Fraud	State of Oregon v. Vendu Services, Inc.	P	☐	☐	☐	Oregon Circuit Court, Marion County (1993)	Oregon State Attorney General/Gene Ebersole	Forensic accounting; calculation of defendant's unreported sales revenue.
123	Fraud, breach of contract	Jo Edward Enterprises, Inc. v. Ball, Ball, Brosamer, Inc., et al.	D	☐	☐	☐	District Court, City and County of Denver, Colorado; Civil Action #9 CV 4495 (1995)	Holland & Hart/Robert Benson, Todd Miller	Forensic accounting. Analysis of invoice and payment transactions.
124	Fraud, Securities Laws Violations	Securities and Exchange Commission v. Sunwest Management, Inc., et al.	D	☐	☑	☑	US District Court, District of Oregon; Case No. 09-CV-6056	Ball Janik, LLP / Rick Stone, Tony Summers, Robert Taylor	Perform forensic accounting analysis.
125	Fraud, Unfair Business Practices	Paul Miller v. Bank of America [Class Action]	P	☑	☑	☐	Superior Court of California; San Francisco County; Case No. 301917	The Sturdevant Law Firm/Jim Sturdevant, Mark Johnson, Jesper Rasmussen	Determine NSF fees charged to class. Profitability analysis.
126	Fraudulent transfer	Dorothee Dary, et al. v. William and Lee Ann Gi bert, et al.	D	☑	☐	☐	Superior Court of California; San Mateo County; Case No. 406876	Werner & Burke/Ryan Werner, Joe Burke	Determine goodwill value of saloon.
127	Good Faith And Fair Dealing	Checking Account Overdraft Litigation MDL No. 2036 (BancorpSouth Bank) [Class Action]	P	☑	☐	☐	U.S. District Court, Southern District of Florida; Case No. 1:09-MD-02036 JLK	Kopelowitz Ostrow Ferguson Weiselberg Keechl / Jonathan Streisfeld	Develop methodologies to measure overdraft fee damages due to defendant bank's alleged wrongful practice of posting debits to customer accounts in high-to-low order of dollar amount.
128	Good Faith And Fair Dealing	Checking Account Overdraft Litigation MDL No. 2036 (Capital One) [Class Action]	P	☐	☐	☐	U.S. District Court, Southern District of Florida, Miami Division; Case No. 1:09-MD-02036 JLK	Golomb & Honik / Ken Grunfeld; Golomb & Honik; Grossman Roth, P.A. / Bobby Gilbert	Develop methodologies to measure overdraft fee damages due to defendant bank's alleged wrongful practice of posting debits to customer accounts in high-to-low order of dollar amount.
129	Good Faith And Fair Dealing	Checking Account Overdraft Litigation MDL No. 2036 (Union Bank of California) [Class Action]	P	☐	☐	☐	U.S. District Court, Southern District of Florida; Case No. 1:09-MD-02036 JLK	Lieff, Cabraser, Heimann & Bernstein / Roger Heller, Michael Sobol	Develop methodologies to measure overdraft fee damages due to defendant bank's alleged wrongful practice of posting debits to customer accounts in high-to-low order of dollar amount.
130	Good Faith And Fair Dealing	In Re: Chase Bank USA, N.A. "Check Loan" Contract Litigation [Class Action]	P	☑	☐	☐	U.S. District Court, Northern District of California; Case No. 09-cv-02032 MMC; MDL NO. 2032	The Sturdevant Law Firm / Jim Sturdevant; Green Welling / Robert Green; Lieff Cabraser Heimann & Bernstein / Roger Heller.	Analysis of damages due plaintiff borrowers due to Chase Bank's change in terms of "Check Loan" agreements.

	Type	Lawsuit	*	Testimony Dep	T	Dec	Court	Law Firm	Work Performed
131	Insurance claim	Christensen Yachts v. New Hampshire Insurance	P	☐	☐	☐	Arbitration (1992)	N/A	Determine economic impact on yacht manufacturer following destruction of manufacturing facility by fire.
132	Intellectual property	Virgin Vision, Ltd. v. The Samuel Goldwyn Co.	P	☐	☐	☐	California State Superior Court, Los Angeles County; No. BC-013701 (1994)	Law Offices of James P. Tierney/Susan Cleary	Determine damages due to defendant's failure to post listing in film credits.
133	Intentional interference with prospective business advantage	Phase Metrics, Inc. v. Magnetic Recording Solutions, Inc., et al.	D	☐	☐	☐	U.S. District Court, Northern District of California; Case No. C-98-1799-CAL	Hoge, Fenton, Jones & Appel/Howard Lloyd, Bill Bretschneider	Calculate plaintiff's damages resulting from defendant's interfering with plaintiff's contract with third party concerning sale of hard disk drive testing equipment manufacturer.
134	Interference with Prospective Economic Advantage	Asahi Kasei Pharma Corporation v. Actelion LTD, et al.	P	☐	☐	☑	California Superior Court, San Mateo County; Case No. CIV 478533	Morgan Lewis & Bockius / Ben Smith, Chris Banks	Analysis of damages due to Actelion's alleged interference with Asahi's contract with CoTherix to develop the drug Fasudil for the treatment of pulmonary arterial hypertension ("PAH").
135	Labor law violations	David Cooke, et al. v. Fremont Rideout Health Group [Class Action]	P	☑	☐	☑	California Superior Court, County of Yuba; Case No. 08-0000278	Kershaw, Cutter & Ratinoff / Bill Kershaw, Lyle Cook	Calculate plaintiff class damages due to defendant's alleged failure to compensate certain employees pursuant to California wage and hour laws.
136	Labor law violations	Jason Campbell, et al. v. PricewaterhouseCoopers, LLP [Class Action]	P	☑	☐	☐	US District Court, Eastern District of California, Case No.: 06-CV-02376-LKK-GGH	Kershaw, Cutter & Ratinoff LLP / Bill Kershaw	Calculate plaintiff class damages due to PWC's alleged failure to compensate certain employees pursuant to California wage and hour laws.
137	Labor law violations	Julie Campanelli, et al. v. The Hershey Company [Class Action]	P	☑	☐	☐	U.S. District Court, Northern District of California; Case No. 08-cv-01862-WDB	The Brandi Law Firm / Thomas Brandi, Brian Malloy	Analysis of overtime wages due.
138	Labor law violations	Yelena Lebedchik, et al., v. Pacific Bell Telephone Co. [Class Action]	P	☐	☐	☐	U.S. District Court, Eastern District of California; Case No. 2-07-CV-392	Kershaw, Cutter & Ratinoff / Brooks Cutter	Analysis of class damages due Pacific Bell's alleged violation of California labor laws.
139	Lanham Act	Collegenet, Inc. v. Embark.com, Inc.	D	☐	☐	☐	U.S. District Court, Oregon; Case No. CV 00 981 ST	Stoll, Stoll, Berne, Lokting & Shlachter/Robert Stoll	Determine plaintiff's damages due to alleged false statements by defendants regarding online college application website service.
140	Lanham Act	Monogram Aerospace Fasteners, Inc. v. The Fairchild Corporation	D	☑	☐	☐	Los Angeles Superior Court (2001)	Irell & Manella/Tom Foley, Mike Ermer	Determine plaintiff's damages due to wrongful termination notice.

	Type	Lawsuit	*	Testimony Dep	Testimony T	Testimony Dec	Court	Law Firm	Work Performed
141	Lanham Act	Southland Sod Farms v. Stover Seed Company, et al.	P	☐	☐	☐	U.S. District Court, Central District of California; Civil No. 92-4894-JMI (1994)	Nordman, Cormony, Hair & Compton/Bob Compton	Determine damages due to defendant's alleged false advertising regarding proprietary grass seed.
142	Lanham Act	Tube Forgings, Inc. v. Weldbend, Inc.	D	☐	☐	☐	U.S. District Court, Oregon (1992)	Mayer, Brown & Platt/Tom McNeill	Determine damages due to defendant's alleged false advertising regarding carbon steel butt-weld pipe fittings.
143	Legal malpractice	Chain Tool Co. v. Workman, Nydegger & Jensen, et al.	P	☐	☐	☐	Third District Court, Utah (1990)	Wi kins, Oritt & Headman/Jeff Oritt	Determine damages due to defendant law firm's failure to procure foreign patent protection for U.S. patented chain tool device.
144	Legal malpractice	Dr. Magda Botez v. Herzfeld & Rubin, International Housing Systems, Inc.	P	☐	☐	☐	Superior Court of the State of California, County of Los Angeles; Case No. BC 192893	Green, Broillet, Taylor, Wheeler & Panish/Bruce Broillet, Scott Carr	Prepare valuation analysis of hotel/spa opportunity in Romania.
145	Lender liability	First Interstate Bank of Oregon v. Haynes & Waldon Farms, Inc.	P	☐	☐	☐	Oregon Circuit Court, Deschutes County (1989)	Marceau, Karnopp, Peterson, Noteboom & Hubel/Martin Hansen	Forensic accounting. Determine cause of failure of defendant's potato farming operation.
146	Lender liability	Hrebec Properties, Inc. v. First Interstate Bank of California	D	☐	☐	☐	Oregon Circuit Court, Multnomah County (1991)	Lane Powell Spears Lubersky/Bob Maloney	Calculate damages due to defendant's alleged breach of contract to provide funding for construction of apartment complex.
147	L bel	JRS Products v. Network Office Systems	P	☐	☐	☐	Sacramento County Superior Court, California; Case No. 95 AS 04411 (1997)	Law Offices of Richard Hart/ Richard Hart	Compute plaintiff's lost profits.
148	Marital dissolution	McCaw v. McCaw	P	☐	☐	☐	King County Superior Court, Washington; Case No. 95-3-07235-0 SEA (1997)	Perkins Coie; Danielson, Harrigan & Tollefson; Kinzel, Allan, Skone & Searing; Law Offices of Gordon Wilcox	Investigatory accounting regarding divorce.
149	Marital dissolution	Orem v. Orem	P	☐	☐	☐	Oregon Circuit Court, Klamath County (1993)	James, Denecke & Harris/Richard Urrutia	Business valuation; valuation of marital estate.
150	Marital dissolution	Sohn v. Sohn	P	☐	☐	☐	Oregon Circuit Court, Douglas County (1991)	Hutchinson, Anderson, Cox, Parrish & Coons	Business valuation.
151	Misappropriation of intangible assets	E.L. Hamm & Associates, Inc. v. American Management Systems, Inc., et al.	D	☐	☐	☐	U.S. District Court, Eastern District of Virginia, Norfolk Division; Case No. 2:98cv1046	Shaw Pittman Potts & Trowbridge/Ralph Taylor; Kaufman & Canoles/Steve Noona	Rebut plaintiff's damages analysis regarding valuation of computer graphics marketing material.
152	Partnership dissolution	Franklin v. Johnny Limbo & The Lugnuts	P	☐	☐	☐	Oregon Circuit Court, Multnomah County (1994)	Jolles, Sokol & Berstein/Bernie Jolles	Prepare valuation analysis of band member's interest in partnership.

	Type	Lawsuit	*	Testimony Dep	Testimony T	Testimony Dec	Court	Law Firm	Work Performed
153	Patent Infringement	Adaptix, Inc. v. Alcatel-Lucent USA, Inc. et al.	D	☐	☐	☐	U.S. District Court, Eastern District of Texas (Tyler Division); Case No. 6:12-cv-00022-LED	Quinn Emanuel / Stephen Swedlow, Marc Kaplan	Calculate reasonable royalty damages regarding patents related to 4G cellular network switching technology.
154	Patent Infringement	Advanced Micro Devices, Inc., et al. v. Samsung Electronics Co., LTD., et al.	P	☐	☐	☐	U.S. District Court, Northern District of California; Case No. CV-08-0986-SL	Robins, Kaplan, Miller & Ciresi / Bill Manning, Eric Jackson	Calculate reasonable royalty damages due to Samsung's alleged infringement of patents related to memory, microprocessor and digital display technologies.
155	Patent Infringement	Allvoice Developments US, LLC v. Microsoft Corp.	P	☐	☐	☐	U.S. District Court, Washington (Western District); Case No. C10-2102RAJ	Susman Godfrey / Ian Crosby, Rachael Black; Gardere Wynne Sewell LLP / Chris Perque	Analysis of reasonable royalty damages due to Microsoft's alleged infringement of patented technology related to speeh recognition.
156	Patent Infringement	Altana Pharma, AG and Wyeth v. Teva Pharmaceuticals USA, Inc. and Teva Pharmaceuticals, Ltd.	D	☐	☐	☑	U.S. District Court, District of New Jersey; Case No. 04-2355	Merchant & Gould / Chris Sorenson	ANDA case. Provide declaration testimony regarding methodologies and ability to quantify patent infringement damages allegedly resulting from introduction of generic version of Protonix (Pantoprazole).
157	Patent Infringement	Ameranth, Inc. v. Genesis Gaming Solutions, Inc. et al.	D	☐	☐	☐	U.S. District Court, Central District of California; Case No. SACV11-0189 AG (RNBx)	Law Office of David B. Abel / David Abel	Analysis of reasoanble royalty damages regarding defendant's alleged infringement of patents related to casino gaming management software.
158	Patent Infringement	American Video Graphics v. Microsoft	P	☐	☐	☐	U.S. District Court, Eastern District of Texas; Case No. 6:05cv006 LED	McKool & Smith / Chris Harrington	Calculation of damages due to Microsoft's infringement of patents regarding pre-emptive multitasking in a computer operating system.
159	Patent Infringement	Apple Computer, Inc. v. Burst.com, Inc.	D	☐	☐	☑	U.S. District Court, Northern District of California; Case No. 06-CV-00019 MHP	Susman Godfrey / Floyd Short	Analysis of reasonable royalty damages due to Apple's alleged infringement of Burst.com's patents related audio and video data storage and transmission.
160	Patent Infringement	Atari Corporation v. Sega of America, Inc.	P	☐	☐	☐	U.S. District Court, Northern District of California (1994)	Flehr, Hohbach, Test, A britton & Gerbert/Richard Doyle, Jr.	Calculate reasonable royalty damages related to patented video game technology.
161	Patent Infringement	Atari v. Nintendo	P	☐	☐	☐	U.S. District Court, Northern California (1992)	Knobbe, Martens, Olson & Bear	Calculate reasonable royalty damages related to patented video game technology.

BRUCE L. McFARLANE
CONSULTING AND TESTIMONY CASE LISTING

	Type	Lawsuit	*	Testimony Dep	T	Dec	Court	Law Firm	Work Performed
162	Patent Infringement	Avia v. Nike, Inc.	D	☐	☐	☐	U.S. District Court, Oregon (1992)	Baker & Botts/Scott Partridge, Tim Durst	Calculate reasonable royalty damages regarding air sole shoe technology.
163	Patent Infringement	Brandeis University, et al. v. East Side Ovens, Inc., et al.	P	☐	☐	☐	U.S. Dist. Court, Northern Dist. Of Illinois; Case No. 1:12-CV-01508	Quarles & Brady LLP / Matt Duchemin	Analysis of damages due to defendants' alleged infringement of patents related to improving cholesterol levels in food products.
164	Patent Infringement	Brent Townshend v. Rockwell Semiconductor Systems, Inc., et al.	P	☐	☐	☐	Superior Court of California, County of San Mateo (1998)	Wilson Sonsini Goodrich & Rosati/Ken Wilson, Betsy Lear	Calculate lost profits and reasonable royalty damages due to Rockwell's infringement of Townshend's patents regarding 56k modem technology.
165	Patent Infringement	Callpod, Inc. v. GN Netcom, Inc., et al.	D	☑	☐	☐	U.S. District Court, Northern District of Illinois, Eastern Division; Case No. 06CV4961	Arnold & Porter / Monty Agarwal, Aaron Schur	Determine reasonable royalty damages due to GN Netcom's alleged infringement of Callpod's patented invention related to wireless multi-user conferencing devices.
166	Patent infringement	Callpod, Inc. v. T Technology, Inc., et al., (GN Netcom)	D	☐	☐	☐	U.S. Dist. Court, Eastern Disctrict of Texas, Marshall Division; Case No. 2:11-cv-00326-JRG-RSP	Haynes and Boone LLP / Bill Nash, Adam Sencenbaugh	Calculation of damages due to GN Netcom's alleged infringment of patents relating to wireless conference calling.
167	Patent infringement	Convolve, Inc. v. Dell, Inc., et al.	P	☑	☑	☐	U.S. District Court, Eastern District of Texas, Marshall Division; Civil Action No. 2:08-cv-244	Robins Kaplan Miller & Ciresi / Jim Anderson, Anna Carr	Analysis of reasonable royalty damages due to defendants' alleged infringment of Convolve's patented technology regarding accoustic management in hard disk drives.
168	Patent Infringement	Cryptography Research, Inc. v. VISA International Service Association	D	☐	☐	☐	U.S. District Court, Northern District of California (San Jose Division); Case No. 05:C-04-4143 JW	Mayer Brown / Brandon Baum	Determine reasonable royalty damages due to VISA's alleged infringement of patented technology regarding smart card security features.
169	Patent Infringement	Cylink Corporation v. RSA Data Security, Inc.	D	☐	☐	☐	U.S. District Court, Northern District of California (1995)	Tomlinson, Zisko, Morosoli & Maser/Jim Busselle, Tom Moore	Calculate reasonable royalty damages regarding data encryption technology.
170	Patent Infringement	Datascape v. Avaya	P	☐	☐	☐	n/a (prelitigation license negotiation)	Robins Kaplan Miller & Ciresi / Steve Risley, Scott Culpepper	Analysis of reasonable royalty damages due to Avaya's' alleged infringment of Datascape's patented technology regarding WAP enabled cell phones.

	Type	Lawsuit	*	Testimony Dep	T	Dec	Court	Law Firm	Work Performed
171	Patent Infringement	Datascape, Inc v. Sprint Nextel Corporation, et al.	P	☐	☐	☐	U.S. District Court, Northern District of Georgia, Atlanta Division / Civil Action File No. 1:07-CV-0640-CC	Robins Kaplan Miller & Ciresi / Jim Anderson, Heidi Raschke	Analysis of reasonable royalty damages due to Sprint's alleged infringment of Datascape's patented technology regarding WAP enabled cell phones.
172	Patent Infringement	Datascape, Inc. v. Kyocera Wireless Corp., Inc.	P	☐	☐	☐	U.S. District Court, Northern District of Georgia. Civil Action No. 1:05-CV-1651-CC	Robins Kaplan Miller & Ciresi / Steve Risley, Scott Culpepper	Determine reasonable royalty damages due to Kyocera's infringement of portfolio of patents related to WAP enabled cellular telephones.
173	Patent Infringement	Datascape, Inc. v. Sharp Electronics	P	☐	☐	☐	n/a (prelitigation license negotiation)	Robins Kaplan Miller & Ciresi / Jim Anderson	Analysis of reasonable royalty damages due to Sharp's alleged infringment of Datascape's patented technology regarding WAP enabled cell phones.
174	Patent Infringement	Datascape, Inc. v. Sony Ericsson Mobile Communications, Inc.	P	☐	☐	☐	U.S. District Court, Northern District of Georgia. Case No. 1:05-CV-3317-CC	Robins Kaplan Miller & Ciresi / Steve Risley, Scott Culpepper	Determine reasonable royalty damages due to Sony Ericsson's infringement of portfolio of patents related to WAP enabled cellular telephones.
175	Patent Infringement	Datascape, Inc. v. UTStarcom, Inc.	P	☐	☐	☐	U.S. District Court, Northern District of Georgia. Case No. 1:05-CV-3164-CC	Robins Kaplan Miller & Ciresi / Steve Risley, Scott Culpepper	Determine reasonable royalty damages due to UTStarcom's infringement of portfolio of patents related to WAP enabled cellular telephones.
176	Patent Infringement	e2Interative, Inc., et al., v. Blackhawk Network, Inc.	P	☑	☑	☐	U.S. District Court, Wisconsin (Western District); Case No. 09-cv-629-slc	Alston & Bird / Robin McGrath	Analysis of lost profits and reasonable royalty damages related to Blackhawk's alleged infringement of patented technology related to gift cards and prepaid telephone calling cards.
177	Patent Infringement	Eastman Kodak Company v. Sony Corporation	P	☐	☐	☐	U.S. District Court, Eastern District of Texas (1993)	Jones, Day, Reavis & Pogue/Jim Wamsley, Leo Aggazino	Calculate reasonable royalty damages regarding microgap camcorder technology.
178	Patent Infringement	Elantech Devices Corporation v. Synaptics, Inc.	D	☐	☐	☐	U.S. District Court, Northern District of California; Case No. C 06-01839	Morrison & Foerster / Karl Kramer	Analysis of lost profits and reasonable royalty damages due to Synaptics's alleged infringement of Elantech's patents related to touch sensor pads.
179	Patent Infringement	Electro Scientific Industries, Inc. v. Dynamic Details, Inc., GSI Lumonics, Inc.	D	☐	☐	☐	U.S. District Court, Central District of California; No. SACV00-272 AHS (2001)	Knobbe, Martens, Olson & Bear/Don Martens, Paul Stewart	Rebut patentee's lost profits and reasonable royalty damages analysis re patent for microvia laser drilling system.

	Type	Lawsuit	*	Testimony Dep	T	Dec	Court	Law Firm	Work Performed
180	Patent Infringement	Elk Industries, Inc. v. Glenayre Electronics, Inc.	P	☐	☐	☐	U.S. District Court, Southern District of Florida (1993)	Christensen O'Connor Johnson Kindness/Jim Uhlir	Calculate reasonable royalty damages regarding electronic aviation technology.
181	Patent Infringement	Engineered Products Co., v. Donaldson Company, Incorporated.	D	☐	☐	☐	U.S. District Court, Northern District of Iowa; Case No. 98-2106MJM (2000)	Robins, Kaplan, Miller & Ciresi/Annamarie Daley, Ken Hall	Rebut plaintiff's lost profits and reasonable royalty analysis re air restriction indicators.
182	Patent infringement	Enovsys LLC v. AT&T Mobility, Inc., et al.	D	☐	☐	☐	U.S. Dist. Court, Central Dist. Of California; Case No. CV11-05210 DDP	Baker & Botts / B. C. Boren, Kevin Cadwell, Jon Swenson	Calculate damages due to AT&T's alleged infringement of patents related to location based services on mobile devices.
183	Patent Infringement	Enterasys Networks, Inc. v. Foundry Networks, Inc. and Extreme Networks, Inc.	P	☐	☐	☐	U.S. District Court, District of Massachusetts (Eastern Division); Civil Action No. 05 11298 DPW	Robins Kaplan Miller & Ciresi / Jim Anderson, Chris Sullivan	Determine patent infringement damages due to defendants alleged infringement of patented network switch technology.
184	Patent Infringement	Extreme Networks, Inc. v. Enterasys Networks, Inc.	D	☑	☑	☐	U.S. District Court, Western District of Wisconsin; Civil Action No. 07-C-0229-C	Robins Kaplan Miller & Ciresi / Jim Anderson, Chris Sullivan	Determine reasonable royalty damages due to Extreme Networks' alleged infringement of patents relating to layer 2 / layer 3 network switches.
185	Patent Infringement	Georgia-Pacific Consumer Products LP v. The Clorox Company	P	☐	☐	☐	U.S. District Court, Northern District of Georgia, Atlanta Division; Case No. 1:08-CV-176	Robins Kaplan Miller & Ciresi / Jim Anderson	Determine reasonable royalty damages due to Clorox's alleged infringement of patent regarding container design for dispensing disinfectant wipes.
186	Patent Infringement	GeoTag, Inc. v. Aromatique, Inc.., et al.	D	☐	☐	☐	U.S. District Court, Eastern District of Texas, Marshall Division, Case No. 2:10-cv-00570-JRG	Alston Bird / Kamran Jivani, Josh Weeks	Analysis of reasoanble royalty damages.
187	Patent Infringement	Globetectrust LLC v. AT&T Services, Inc., et al	D	☐	☐	☐	U.S. District Court, District of Deleware; Case No. 1:12-cv-01234-UNA	Baker & Botts / Kevin Cadwell, Roger Fulghum, Bill Rothwell	Analysis of patent infringement damages due to AT&T's infringement of patents related to optical fiber technology.
188	Patent Infringement	GraphOn Corp. v. Autotrader.com, Inc.	P	☑	☐	☐	U.S. District Court, Eastern District of Texas, Civil Action No. 2:05-CV-530 (JTW)	Watson Rounds / Michael Rounds	Determine reasonable royalty damages due to Autotrader's alleged infringement of GraphOn patents related to automated online service and directory technology.
189	Patent infringement	GraphOn Corporation v. Juniper Networks, Inc.	P	☐	☐	☐	U.S. District Court, Eastern District of Texas, Marshall Division; Case No: 2:07-CV-373-TJW-CE	Watson Rounds / Michael Rounds; Vanek | Vickers | Masini / Joe Vanek.	Calculate royalty damages due GraphOn due to Juniper Network's alleged infringement of GraphOn's patents related to networking device technology.

	Type	Lawsuit	*	Testimony Dep	T	Dec	Court	Law Firm	Work Performed
190	Patent Infringement	GunVault, Inc. v. Windrode Enterprises, Inc. d/b/a Bulldog Cases	D	☐	☐	☐	U.S. District Court, Central District of California; Case No. 5:12-cv-01459-GHK-RZ	Owens & Tarabichi / David Owens	Respond to GunVault's patent infringement damages analysis regarding Wintrode's infringement of patent related to latch mechanism on gun vaults.
191	Patent Infringement	Hemopet v. Hill's Pet Nutrition, Inc.	P	☑	☐	☐	U.S. District Court, Central District of California, Southern Division; Case No. SACV12-01908 JST (JPRx)	Susman Godfrey / Joe Grinstein, Frances Lewis, John Lahad	Calculation of reasonable royalty damages due to infringement of patents related to use of genomic data in developing nutritional pet food.
192	Patent Infringement	Hemopet v. Nestle' Purina Petcare Company	P	☐	☐	☐	U.S. District Court, Central District of California, Southern Division; Case No. 8:12-cv-01907-JST-JPR	Susman Godfrey / Joe Grinstein, Frances Lewis, John Lahad	Calculation of reasonable royalty damages due to infringement of patents related to use of genomic data in developing nutritional pet food.
193	Patent Infringement	HPD Laboratories, Inc. v. The Clorox Company	D	☐	☐	☐	US District Court; Northern District of California (2001)	Morrison & Foerster/Mike Carlson, Brooks Beard	Determine lost profits and reasonable royalty damages due to defendants infringement of patents regarding toilet bowl cleaner technology.
194	Patent Infringement	Huse v. Stratagene	P	☐	☐	☐	California Superior Court, San Diego County (1991)	Pillsbury, Madison & Sutro/Ina Risman	Calculate reasonable royalty damages regarding cloning technology.
195	Patent Infringement	Intel Corporation and Dell, Inc. v. Commonwealth Scientific and Industrial Research Organization	D	☐	☐	☐	U.S. District Court, Eastern District of Texas, Tyler Division; Case No. 6:06-cv-0055 1-LED	Townsend and Townsend and Crew / Dan Furniss, Louise Ma, Rob Tadlock	Determine reasonable royalty damages due to Intel's alleged infringement of patented wireless 802.11 technology.
196	Patent Infringement	Intergraph Corporation v. Intel Corporation	P	☑	☐	☐	U.S. District Court, Northern District of Alabama; Case No. CV 97-N-3023-NE (1999)	Townsend, Townsend & Crew/Bill Jaeger, Rick Grossman,Bill Bohler; McDermott Will & Emory / Steve Akerley	Determine reasonable royalty damages due to Intel's alleged infringement of Intergraph's Clipper patents related to multiple caching strategies used in microprocessors. Determine reasonable royalty damages due to Intergraph's alleged infringement of Intel patents related to RAID and graphics patents.
197	Patent Infringement	Intergraph Hardware Technologies Company v. Hewlett-Packard Company, et al.	P	☐	☐	☐	U.S. District Court, Eastern District of Texas, Marshall Division; Case No. 2-02CV-312 TJW (2004)	Robins Kaplan Miller & Ciresi / Bill Manning, Jim Anderson, Eric Jackson, Bill Marino	Determine reasonable royalty damages for Intergraph's Clipper patents related to multiple caching strategies used in microprocessors.

	Type	Lawsuit	*	Testimony Dep	T	Dec	Court	Law Firm	Work Performed
198	Patent Infringement	Japan Cash Machine Co., Ltd, JCM American Corporation v. MEI, Inc.	P	☑	☑	☑	U.S. District Court, District of Nevada; Civil Action No. 2:05-cv-01433 (RCJ)	Watson Rounds / Mike Rounds; DLA Piper / David Abel	Analysis of plaintiffs' damages due to MEI's alleged infringement of plaintiffs' patents pertaining to bill validators used in casino gaming devices.
199	Patent Infringement	Johnson v. Anderson	D	☐	☐	☐	California Superior Court, San Francisco County (1993)	Walter Moeller/Bill Caspari	Calculate reasonable royalty regarding wood stove design technology.
200	Patent Infringement	Juniper Networks, Inc. v. GraphOn Corporation and Vertical Marketing, Inc.	D	☐	☐	☐	US District Court, District of Virginia, Alexandria Division; Case No. 1:09cv287 GBL/TRJ	Watson Rounds / Michael Rounds; Manek, Vickers & Masini / Joe Vanek	Analysis of reasonable royalty damages Juniper suffered as a result of GraphOn's alleged infringement of Juniper's patent related to data transmission in computer networks.
201	Patent Infringement	K2 Corporation v. Salomon S.A., et al.	P	☐	☐	☐	U.S. District Court, Western District of Washington; Case No. C98-1781 WD (1999)	Christensen O'Connor Johnson Kindness/Ross Boundy; Black, Lowe & Graham/Larry Graham	Calculate lost profits and reasonable royalty damages due to Salomon's infringement of K2's patents regarding inline skates.
202	Patent Infringement	Marshall Patent Holdings, LLC v. InComm Holdings, Inc. and U.S. South Communications, Inc.	D	☑	☐	☐	U.S. District Court, Eastern District of Texas, Tyler Division; Civil Action No. 6:08-cv-222	Alston Bird / Robin McGrath, Joe Gleason	Analysis of reasonable royalty damages due to defendants' alleged infringement of patentee's technology related to prepaid telephone calling cards.
203	Patent Infringement	McKesson Information Solutions LLC v. The Trizetto Group, Inc.	P	☐	☐	☐	U.S. District Court Northern District of Delaware; Case No. 04-1258 (2005)	Skadden Arps Slate Meagher & Flom	Patent infringement damages analysis.
204	Patent Infringement	MEI, Inc. v. JCM American Corp, et al.	D	☐	☐	☐	U.S. District Court, District of New Jersey; Case No. 1:09-cv-00351	DLA Piper / David Abel	Analis of lost profits and reasonable royalty damages due to JCM's alleged infringement of invention related to currency validators used in gaming devices.
205	Patent Infringement	Microsoft v. Amazon	D	☐	☐	☐	n/a (pre litigation licensing negotiation)	Susman Godfrey / Justin Nelson	Analysis of reasonable royalty damages due to Amazon's alleged infringement of Microsoft's patented technology used in Amazon's Kindle Reader.
206	Patent Infringement	Monticelli v. Pacific Gas & Electric	D	☐	☐	☐	U.S. District Court, Northern District of California; Case No. C94 1754 (1995)	PG&E in-house counsel/ Adam Chodorow	Calculate reasonable royalty regarding cooling tower construction design.
207	Patent Infringement	Nichia Corporation v. Seoul Semiconductor, Co., Ltd., Seoul Semiconductor, Inc.	D	☑	☐	☑	United States District Court, Northern District of California. Case No. 3:06-CV-0162 MMC	Bingham McCutchen / Beth Parker, Monte Agarwal	Analysis of Nichia's damages resulting from Seoul Semiconductor's alleged infringement of Nichia's design patents regarding high brightness, white side-view LEDs.

	Type	Lawsuit	*	Testimony Dep	T	Dec	Court	Law Firm	Work Performed
208	Patent Infringement	Nova Measuring Instruments, Ltd. v. Nanometrics, Inc.	D	☑	☐	☐	U.S. District Court, Northern District of California, San Francisco Division; Case No. C05 00986 MMC (BZ)	Beck, Ross, Bismonte & Finley	Analysis of lost profits and reasonable royalty damages as a result of Nanometrics alleged infringement of patent pertaining to integrated metrology used in semiconductor manufacturing.
209	Patent Infringement	Nova Science v. Abbott	P	☐	☐	☐	n/a	Mintz Levin / Mike Renaud	Evaluate potential patent infringement damages due to Abbott's assumed infringement of surgical stapler technologies.
210	Patent Infringement	Orlaford Limited, et al. V. BBC International, et al.	P	☐	☐	☐	U.S. District Court Western District of Wisconsin; Civil Action No. 97-C-0540-S (1998)	Foley & Lardner	Calculate patent infringement damages due to defendant's alleged infringement of patents regarding lights in heels of children's shoes.
211	Patent Infringement	Otter Products, LLC v. Mophie, Inc.	P	☐	☐	☐	U.S. District Court, Colorado. Civil Action No. 1:12-cv-1969	Turner Boyd / James Beard, Robert Kent	Determine reasonable royalty damages due to Mophie's alleged infringement of patents related to cell phone case technology.
212	Patent Infringement	Pactiv Corporation v. S.C. Johnson	P	☐	☐	☐	U.S. District Court, Northern District of Illinois; Case No. 98C-2679 (2000)	Jenner & Block/Jim Benak, Andrew Jacobs	Calculate plaintiff's lost profits and reasonable royalty damages due to defendant's infringement of plaintiff's patent regarding slider zipper food storage bags.
213	Patent Infringement	Petrosky v. N ke, Inc.	D	☐	☐	☐	U.S. District Court, Virginia (1991)	Banner, Birch, McKie & Beckett/Roger Tate, Alan Kantor	Calculate reasonable royalty damages regarding air sole shoe technology.
214	Patent Infringement	Pitney Bowes v. Stamps.com	D	☐	☐	☐	U.S. District Court, District of Delaware; Case No. 02-042 JJF (2002)	Irell & Manella/Elliott Brown, Ben Hattenbach	Determine reasonable royalty damages due to Stamps' infringement of Pitney patents regarding internet postage.
215	Patent Infringement	Pitney Bowes, Inc. v. Hewlett Packard	D	☐	☐	☐	U.S. District Court, District of Connecticut; Civil Action No. 395CV01764 (1997)	Pennie & Edmonds/Jack Lauter, Steve Harbulak, Garland Stephens	Calculate reasonable royalty regarding resolution enhancement technology for laser printers.
216	Patent Infringement	Precor v. Weider Health & Fitness, Inc.	P	☐	☐	☐	U.S. District Court, Western District of Washington; Civil No. C91-1743Z (1993)	Christensen, O'Connor, Johnson & Kindness/Jim Uhlir, Tom Theisen	Lost profits/reasonable royalty calculation regarding exercise equipment.
217	Patent Infringement	Preservation Technologies LLC v. AT&T Services, Inc., et al.U.S. District Court, Central District of California, Southern Division; Case No. SACV11-01860 DOC	D	☐	☐	☐	U.S. District Court, Central District of California, Southern Division; Case No. SACV11-01860 DOC	Baker & Botts / B. C. Boren, Roger Fulghum, Lisa Kelly	Calculation of reasonable royalty damages due to infringement of patents related to management of multimedia assets.

	Type	Lawsuit	*	Testimony Dep	T	Dec	Court	Law Firm	Work Performed
218	Patent Infringement	Real Estate Alliance Ltd And Equias Technology Development LLC v. Move, Inc.	D	☑	☐	☐	U.S. District Court, Central District of California, Western Division; Case No. 07-02185-GAF	Alston Bird / Robin McGrath, Wes Achey	Analysis of reasonable royalty damages due to Move's alleged infringement of REAL's patents related to interactive mapping technology on realtor.com.
219	Patent Infringement	RealSource, Inc. v. Best Buy Company, Inc.	D	☐	☐	☐	U.S. District Court, Western District of Texas, Austin Division, Case No. A0 4CA771 LY	Robins Kaplan Miller & Ciresi / Eric Jackson	Determine reasonable royalty for patented technology related to gift cards.
220	Patent Infringement	Rembrandt Social Media, LP v. Facebook, Inc., Addthis, Inc.	P	☐	☐	☐	U.S. Dist. Court, Eastern Dist. Of Virginia; Case No. 1:13 cv 158	Fish & Richardson / Bob Hillman, John Goetz	Analysis of reasonable royalty damages due to Facebook's alleged infringement of patented technology regarding social media networks.
221	Patent Infringement	Rembrandt Vision Technologies, L.P., v. Johnson & Johnson Vision Care Inc.,	P	☐	☐	☐	U.S. District Court, Middle District of Florida, Jacksonville Division; Case No.: 3:11-cv-00819-J-32-JRK	Robins Kaplan Miller & Ciresi; Jake Holdreith, Cole Fauver	Analysis of reasonable royalty damages due to J&J's alleged infringement of patented technology related to silicon hydrogel contact lenses.
222	Patent Infringement	Richtek Technology Corp. v. uPI Semiconductor, et al.	P	☐	☐	☐	U.S. District Court, Northern District of California, San Francisco Division; Case no. C09-05659 WHA		Calculate damages due plaintiff due to defendants' infringement of patented technology related to power management integrated circuits.
223	Patent Infringement	Seer Systems v. Apple, Inc.	P	☐	☐	☐	U.S. District Court, Northern District of California, San Francisco Division; Case No. 3:13-cv-05252-VC	Weyand Law Firm / Alex Weyand	Analysis of reasonable royalty damages due to Apple's alleged infringement of patented technology related to Apple's Garage Band software appliation.
224	Patent Infringement	Seer Systems, Inc. v. Beatnik, Inc., Microsoft Corporation	P	☐	☐	☐	U.S. District Court, Northern District of California; Case No. C 03 4636 JSW (EDL)	Peterson, Weyand & Martin / Alex Weyand	Determine reasonable royalty rate for Seer patents related to audio data storage and playback.
225	Patent Infringement	Seer Systems, Inc. v. Yamaha Corporation	P	☐	☐	☐	U.S. District Court, Northern District of California; No. C 06--07736 WHA	Peterson, Weyand & Martin / Alex Weyand	Determine reasonable royalty damages due to Yamaha's alleged infringement of Seer's patent regarding audio data storage and playback technology.
226	Patent Infringement	Silicon Graphics, Inc. v. ATI Technologies, Inc., et al.	D	☑	☐	☐	U.S. District Court, Western District of Wisconsin; Civil Action No. 06-C-0611-C	Robins Kaplan Miller & Ciresi / Bill Manning, Eric Jackson	Determine reasonable royalty damages due to ATI's alleged infringement of SGI's patents related to use of floating point computation in rasterization processes in graphics processing units.

	Type	Lawsuit	*	Testimony			Court	Law Firm	Work Performed
				Dep	T	Dec			
227	Patent Infringement	Snyder Industries v. The Heil Company	D	☐	☐	☐	U.S. District Court, Wisconsin (1991)	Banner, Birch, McKie & Beckett/Roger Tate, Chris McKie	Calculate damages due to defendant's alleged infringement of patents regarding refuse container design.
228	Patent Infringement	St. Clair Intellectual Property Licensing, Inc. v. Fuji Photo Film Co. Ltd, Fuji Photo File USA, Inc., and Fujifilm America, Inc., Canon Inc. and Canon USA, Inc.	P	☐	☐	☐	U.S. District Court, District of Delaware; Case No. 03-241-JJF (2004)	Robins Kaplan Miller & Ciresi / Ron Schutz, Jake Holdreith, Becky Thorson, Carrie Lambert	Determine reasonable royalty for St. Clair patents related to multiple file format capability in digital cameras.
229	Patent Infringement	Thought, Inc. v. Oracle Corporation, et al.	P	☑	☐	☐	U.S. District Court, Northern District of California; Case No. 12-cv-05601-WHO	Hagens Berman Sobol Shapiro / Mark Carlson, Nick Boebel; Shugrue Mion / Chandran Iyer, Kelly Hyndman	Analysis of patent infringement damages due to Oracle's infringement of patents related to relational database and related applications technology.
230	Patent infringement	Townshend Intellectual Patent Infringement Property, LLC v. Broadcom Corp.	P	☐	☐	☐	U.S. District Court, Northern District of California (San Jose)	Bingham McCutchen / Bill Abrams, Carlos Mino	Determine reasonable royalty damages due to Broadcom's alleged infringement of patented 56k modem technology.
231	Patent infringement	Tracbeam LLC v. AT&T, Inc., et al.	D	☐	☐	☐	U.S. Dist. Court, Eastern Disctrict of Texas, Tyler Division; Case No. 6:11-cv-96	Baker & Botts / B. C. Boren, Kevin Cadwell, Jon Swenson	Calculate damages due to AT&T's alleged infringement of patents related to location based services on mobile devices.
232	Patent Infringement	True Fitness Technologies, Inc. v. Precor Incorporated	D	☐	☐	☐	U.S. District Court, Eastern District of Missouri; Case No. 4:99 CV1306-DJS (2000)	Christensen O'Connor Johnson Kindness/Ross Boundy, Steve Fricke	Analysis of reasonable royalty damages due to True Fitness' infringement of patent regarding elliptical trainers.
233	Patent Infringement	TVIIM, LLC v. McAfee, Inc.	P	☑	☑	☐	U.S. District Court, Northern District of California; Case No. 13-CV-4545 JST	Lathrop & Gage, LLP / John Shaeffer, Jeff Grant	Analysis of reasonable royalty damages regarding defendant's alleged infringement of patents related to secrity software.
234	Patent Infringement	Ultratec, et al. v. Sorenson Communications, Inc., et al.	P	☑	☑	☐	U.S. District Court, Wisconsin (Western District); Case No. 3:13-cv-00346	Quarles & Brady / Matt Duchemin, Matt Ingersoll	Analysis of patent infringement damages due to Sorenson's infringement of patents related to systems to assist telephone communications by persons with impaired hearing.
235	Patent Infringement	Ultratec, et al. v. Sorenson Communications, Inc., et al.	P	☑	☑	☐	U.S. District Court, Wisconsin (Western District); Case No. 3:14-cv-0066-BBC	Quarles & Brady / Matt Duchemin	Analysis of patent infringement damages due to Sorenson's infringement of patent related to echo cancellation technology in providing captioned telephone service.

	Type	Lawsuit	*	Testimony Dep	T	Dec	Court	Law Firm	Work Performed
236	Patent Infringement	Unisys Corporation v. Actel Corporation and Quicklogic Corporation	P	☐	☐	☐	U.S. District Court, Northern District of California; Case No. C-00-01114 SBA	Pillsbury Winthrup/Bill Abrams, Brian Beatus	Determine reasonable royalty damages due to Quicklogic's infringement of patent regarding of architecture of Field Programmable Gate Arrays (FPGAs).
237	Patent Infringement	University of Pittsburgh v. Varian Medical Systems, Inc.	D	☑	☑	☑	U.S. District Court, Northern District of California; Civil Action No. 2:08-cv-01307-AJS	Orrick Herrington & Sutcliffe / Matt Poppe; Picadio Sneath Miller & Norton / Henry Sneath, Joe Carnicella	Analysis of reasonable royalty damages due to Varian's alleged infringement of inventions related to respiratory gating used in linear accelerators during cancer treatment.
238	Patent Infringement	Vita Zahnfabrik H. Rauter GMBH & Co. v. Dentsply International, Inc.	D	☑	☐	☐	US District Court, Central District of California; Case No. SA CV 04-729	Morgan Lewis & Bockius / Doug Rawles, Andrew Gray	Calculation of patent infringement damages due to infringement of patents related to dental color indicator devices.
239	Patent Infringement	Volterra Semiconductor Corporation v. Primarion, Inc., Infineon Technologies AG, et al.	P	☐	☐	☐	U.S. District Court, Northern District of California; Case No. CV-08-5129 JCS	Farella Braun + Martel / James Morando, Jeff Fisher	Analysis of patent infringement damages. Analysis of commercial success.
240	Patent infringement	Whirlpool Corporation v. TST Water, LLC	P	☐	☐	☐	U.S. District Court, Eastern District of Texas, Marshall Division; Civil Action No. 2:15-cv-1528	Morrison & Foerster / Richard Hung, Chris Jeu	Calculate damages due to defendant's infringement of patented technology related to water filter cartridges used in refrigerators.
241	Patent infringement, theft of trade secret	UniRam Technology, Inc. v. Monolithic System Technology, Taiwan Semiconductor Manufacturing Company, Ltd., TSMC North America	P	☑	☑	☑	U.S. District Court, Northern District of California. Case No. CV-04-01268-VRW	Susman Godfery / Joe Grinstein, Ian Crosby, Jay Neukom; Heim, Payne & Chorush / Russ Chorush	Determine lost profits and reasonable royalty damages due to defendants' infringement of patented technology regarding DRAM semiconductors. Calculate damages due to theft of trade secret.
242	Patent infringement; unfair competition	Precor Incorporated v. Life Fitness	P	☐	☐	☐	U.S. District Court, Western District of Washington; Case No. C94-1586C (1995)	Christensen O'Connor Johnson Kindness/Jim Uhlir, Ross Boundy	Determine lost profits and reasonable royalty due to Precor's alleged infringement of patents re treadmills. Determine Precor's damages due to false statements by Life Fitness.
243	Personal injury	Bridget Bray v. TSP Hotels, Inc., et al.	P	☐	☐	☐	Superior Court of California, County of Alameda; Case No. 406526 (2004)	Banchero Law Firm/Jeff Banchero	Calculation of lost earnings.
244	Personal injury	Khouri v. Roberts	P	☐	☐	☐	Oregon Circuit Court, Washington County (1993)	James, Denecke & Harris/Roger Harris	Calculation of lost earnings.
245	Privacy Rights	Paul Perkins, et al. v. LinkedIn Corporation [Class Action]	P	☐	☐	☐	U.S. District Court, Northern District of California; Case No. 13-cv-04303-LHK	Lieff, Cabraser, Heimann & Bernstein / Nich Diamond, Melissa Gardner	Analysis of damages due to LinkedIn's wrongful use of members' proprietary contact information.

	Type	Lawsuit	*	Testimony Dep	T	Dec	Court	Law Firm	Work Performed
246	Product liability	State of Hawaii v. USX	D	☐	☐	☐	First Circuit Court, Hawaii (1992)	Berman, Paley, Goldstein & Berman/Tony Berman	Damages analysis regarding alleged failure of Corten steel used to construct stadium.
247	RICO	In re: America Honda Motor Co., Dealerships Relations Litigation [Class Action]	P	☐	☐	☐	U.S. District Court, District of Maryland; MDL Case No. 1069	Rapazzini & Graham/Mark Rapazzini, Beth Graham	Calculate Honda dealers' lost profits from misallocation of new Honda automobiles.
248	Securities fraud	Collins v. Tetra Pak, Inc.	P	☐	☑	☐	Oregon Circuit Court, Multnomah County (1991)	James, Denecke & Harris/Roger Harris, Chris Martin	Business valuation and calculation of plaintiff's damages.
249	Securities fraud	Newman, et al. v. Comprehensive Care Corp.	P	☐	☐	☐	U.S. District Court, Oregon (1993)	Ball, Janik & Novack/Sara Ryan	Damages analysis.
250	Securities fraud	The Equitable Life Assurance Society of the United States, et al. v. David S. Shapira, et al.	P	☐	☐	☐	U. S. District Court, Western District of Pennsylvania; Civil Action #93 0631 (1994)	Zelle & Larson/Rick Stone, Betsy Lear	Calculate damages suffered by plaintiff note holders.
251	Securities laws violations	Bartells Co. v. A.P. Green Industries	D	☐	☐	☐	King County Superior Court, Washington (1992)	Thompson & Mitchell	Damages analysis.
252	Securities laws violations	In re: Information Resources, Inc. [Class Action]	P	☐	☐	☐	U.S. District Court, Northern District of Illinois; Civil Action 89C 3712 (1994)	Freeborn & Peters; Katten, Muchin & Zavis	Determine securities damages to class.
253	Theft of Trade Secrets	Ajaxo, Inc. v. E*Trade Group, Inc., et al.	D	☑	☑	☑	Superior Court of California, Santa Clara County; Case No. 1-00-CV 793529	Morgan Lewis / Joe Floren, Ben Smith, Chris Banks, Tera Heintz	Analysis of unjust enrichment damages resulting from alleged misappropriation of trade secrets concerning technology enabling wireless stock trades on cell phones and PDAs.
254	Theft of Trade Secrets	Diablo Technologies, Inc. v. Netlist, Inc.	D	☐	☑	☑	U.S. District Court, Northern District of California, San Francisoco Division, Case No. CV 13 3901	Bartko Zankel Bunzel / Ben Riley, Griff Towle, Simon Goodfellow	Analysis of damages regarding defendant's alleged misappropriation of trade secrets related to flash memory technology.
255	Theft of trade secrets	DJ&J Software Corporation, dba Egghead Software v. Software House International, Inc.	P	☐	☑	☐	Superior Court of California, County of Los Angeles; Case No. BC 097126 (1994)	Perkins Coie/David Biderman, Colleen Reagan, Michael Sorochinsky	Calculate plaintiff's damages due to theft of trade secrets involving customer data.
256	Theft of trade secrets	Evanite Fiber Corporation v. Lauschaer Glaswerk GmbH, et al.	P	☐	☐	☐	U.S. District Court, District of South Carolina, Charleston Division; Civil Action No. 2: 96-3525-18 (1998)	Farleigh, Wada & Witt/Al Bannon, Karen Saul	Calculate plaintiff's damages resulting from defendant's alleged theft of trade secret regarding manufacture of fiberglass.
257	Theft of trade secrets	FundsXpress, Inc. v Digital Insight, Inc.	D	☐	☐	☐	U.S. District Court, Western District of Texas, Austin Division; Case No. A-02-CA-141SS (2002)	Cotton & Gundz k/John Cotton, Aaron Gundzik	Determine damages due to Digital Insight's theft of FundsXpress' trade secret information (customer list, pricing data)

	Type	Lawsuit	*	Testimony Dep	T	Dec	Court	Law Firm	Work Performed
258	Theft of trade secrets	G.C. Micro Corporation v. Trivad, Inc. et al.	D	☑	☐	☐	Superior Court, California, County of Sonoma; Case No. SCV-254684	Dincel Law Group / Kim Dincel, Jonathan Rose; Kronenberger Rosenfeld / Karl Kronenberger, Alison Kwan	Analysis of unjust enrichment damages due to Trivad's alleged use of trade secrets regarding customer data.
259	Theft of trade secrets	Gerber Radio Supply Co., Inc. v. Philips Semiconductors, Inc., et al.	D	☐	☐	☐	U.S. District Court, Massachusetts (1996)	Banchero & Lasater/Jeff Banchero	Valuation of trade secret; rebut plaintiff's damages calculation.
260	Theft of trade secrets	Honeywell International, Inc. v. Secure Wireless, Inc.	P	☐	☐	☐	U.S. District Court, Southern District of California; Case No. 02-cv-2015	Simpson Thatcher & Bartlett / Jeff Ostrow	Analysis of damages due to defendant's alleged misappropriation of trade secrets related to home security systems.
261	Theft of trade secrets	JCM American Corporation v. Mars Electronics International, Inc., Thomas P. Nugent	P	☑	☐	☐	Nevada District Court, Clark County; Civil Action No. 2:05-CV-01433	Watson Rounds / Michael Rounds	Determine damages due to theft of trade secrets related to manufacture of currency validators.
262	Theft of trade secrets	The Profit Recovery Group v. Loder, et al.	P	☑	☐	☐	US District Court; Central District of California, Western Division; Civil Action No. CV 01-6200 GHK (2001)	Knobbe, Martens, Olson & Bear/Vito Canuso, John Holcomb, Linda Zadra-Symes	Analysis to determine whether defendants practiced plaintiff's claimed trade secrets and whether claimed trade secrets possessed independent economic value.
263	Theft of trade secrets	Thomas & Betts Corporation v. Panduit Corp.	P	☐	☐	☐	U.S. District Court, Northern District of Illinois, Eastern Division (1997)	McBride, Baker & Coles/Robert Queeney, George Sanders	Determine damages due to defendant's theft of trade secrets (customer data).
264	Theft of trade secrets	Yield Dynamics, Inc. v. Cypress Semiconductor Corporation	P	☑	☑	☐	American Arbitration Association (2006); Case No. 74 133 00508 06 0MTH	Russo & Hale / Jack Russo, John Kelley, Chris Sargent	Analysis of YDI's damages due to Cypress Semiconductor's alleged unlicensed use of YDI's yield enhancement software.
265	Theft of trade secrets	Yield Dynamics, Inc. v. Lumileds Lighting U.S., LLC.	P	☑	☐	☐	Superior Court for the State of California, Santa Clara County. Case No. 1-05-CV-037009	Russo & Hale / Michael Risch	Determine damages due to Lumileds' theft of trade secrets relating to yield enhancement software.
266	Trademark infringement	Affinity Network, Inc. v. AT&T	D	☐	☐	☐	U.S. District Court, Central District of California (1994)	Jeffer, Mangels, Butler & Marmaro/Stan Gibson	Damages analysis.
267	Trademark infringement	Pacific Electricord Company v. Paige Manufacturing Corp.	D	☐	☐	☐	California Superior Court, Los Angeles County; Case No. BC157514 (1998)	Werner & Burke/Joe Burke	Calculate defendant's damages in cross-complaint against plaintiff for trademark infringement.
268	Trademark infringement	SalesMark, Inc. v. American Management Group, Inc.	D	☐	☐	☐	U. S. District Court, Northern District of California; Civil Action No. C-98-0177 (1998)	Thelen, Reid & Priest/Robert Weikert	Analysis of reasonable royalty, lost profits and unjust enrichment damages.
269	Trademark infringement	Snelling and Snelling, Inc. v. MacLeod Investments, Inc., et al.	D	☐	☐	☐	U. S. District Court, Northern District of California; Civil Action No. C-97 20156 (1997)	Margolis & Morin/Michael Morin	Calculate plaintiff's damages resulting from defendant's trademark infringement.

	Type	Lawsuit	*	Testimony Dep	T	Dec	Court	Law Firm	Work Performed
270	Transaction	Altitude Capital Partners - TPL Group Due Diligence	na	☐	☐	☐	n/a	n/a	Provide economic due diligence analysis in connection with IP investment opportunity.
271	Unfair Business Practices	O'Donavan, et al. v. Cashcall, Inc. [Class Action]	P	☑	☐	☐	U.S. Dist. Court, Northern Dist. Of California; Case No. C 08-03174 MEJ	Sturdevant Law Firm/Jim Sturdevant; Law office of Arthur Levy/Arthur Levy	Analysis of damages due to unconscionable interest rates charged on consumer loans.
272	Unfair competition	Eastman Kodak Company v. St. Clair Intellectual Property Consultants, Inc., et al.	D	☐	☐	☐	Superior Court of California, Santa Clara County; Case No.: 1-05-CV-039164	Robins, Kaplan, Miller & Ciresi / Ron Shutz, Becky Thorson, Carrie Lambert	Analysis of plaintiff's damages analysis regarding St. Clair's alleged unfair competition with respect to intellectual property (patents) regarding digital camera technology.
273	Unfair competition (Lahnam Act)	e-Cards v. Larry Joe King, et al.	P	☐	☐	☐	U. S. District Court, Northern District of California (2000)	Williams & Connolly/Paul Gaffney	Valuation of internet site e-cards.com.
274	Unfair Insurance Practices	Perez v. First American Title Insurance Company [Class Action]	P	☑	☐	☑	US District Court, District of Arizona; Case No. CV-08-1184-PHX-DGC	Schneider Wallace Cottrell Brayton Konecky / Mark Johnson	Analysis of overcharges regarding title insurance premiums.
275	Unjust enrichment, Quantum merit	Galaxy Networks, Inc. v. Kenan Systems Corp.	D	☐	☐	☐	U.S. District Court, Central District of California; Civil Action No. CV-95-5568 DDP (1997)	Irell & Manella/Morgan Chu, Richard Birnholz, Peter Wilcox	Rebut plaintiff's valuation of services performed.
276	Utility rate hearing	Arizona Corporation Commission v. U.S. West	D	☐	☐	☐	Arizona Corporation Commission Rate Hearings (1988)	U.S. West in-house counsel	Prudence review.
277	Various business torts	Adams, et al. v. California State Automobile Association, et al. [Class Action]	D	☐	☐	☐	San Francisco Superior Court, California; No. 916163 (1994)	Thelen, Marrin, Johnson & Bridges/Bob Blum	Cost allocation study.
278	Wire fraud	USA v. Amlani, et al.	D	☐	☐	☐	U.S. District Court, Central District of California (1993)	Howarth & Smith	Financial analysis.
279	Wrongful death	Walker v. Mitchell	P	☐	☐	☐	Oregon Circuit Court, Yamhill County (1993)	James, Denecke & Harris/Richard Urrutia	Calculation of lost earnings.
280	Wrongful eviction	Hill v. Bank of America, et al.	D	☑	☐	☐	Superior Court of California, County of San Francisco; Case No. 959840 (1995)	Bank of America in-house counsel/Scott McMillen	Analysis of plaintiff's damages due to wrongful eviction.
281	Wrongful termination	Heiner v. PacifiCorp	P	☐	☐	☐	Oregon Circuit Court, Multnomah County (1994)	Davis Wright Tremaine/Mike Reiss	Financial analysis; calculation of lost earnings.
282	Wrongful termination	Petrusich v. Russell	D	☐	☐	☐	Oregon Circuit Court, Multnomah County (1987)	Lindsay, Hart, Neil & Weigler/Carol Hewitt	Lost earnings analysis.
283	Wrongful termination	Robert Frisbee v. Enron Corp., FirstPoint, Inc.	P	☐	☐	☐	Arbitration; Case No. 74 J 160 00360 98	Ball Janik/Jacob Tanzer	Value plaintiff's equity participation plan.
284	Wrongful termination	Tengler v. Spare, Tengler, Kaplan & Bischel, et al.	P	☐	☐	☐	California Superior Court; County of San Francisco; Case No. 963822 (1996)	Cooley Godward Castro Huddleson & Tatum/Karin Kubin, Kristina Cordoza	Valuation analysis of plaintiff's minority interest in defendant-asset management firm.

BRUCE L. McFARLANE
CONSULTING AND TESTIMONY CASE LISTING

			Testimony					
Type	Lawsuit	*	Dep	T	Dec	Court	Law Firm	Work Performed

Summary Statistics

Testimony:

	# of Cases
Number of cases in which deposition testimony was given	59
Number of cases in which trial testimony was given	33
Number of cases in which declaration testimony was given	20
Number of cases in which testimony was given	79

Party Retained By:

Number of cases retained on behalf of plaintiff	175	62%
Number of cases retained on behalf of defendant	108	38%
Number of non-litigation related projects	1	
Total number of cases / projects	284	

Intellectual Property Cases:

Patent infringement cases	90
Trade secret cases	14
Trademark cases	4
Copyright cases	2
Other IP cases	1

Class Action Cases: 37

* Party retained by: P = Plaintiff, D = Defendant

Data current as of 7/21/2016

EXHIBIT 2

In Re: Lenovo Adware Litigation

List of Documents Considered

Document Description	Date	Bates Range
1 Adam Frucci, "Acer's Bloatware Adds 2+ Minutes to Boot Time, HP, Dell and Sony Not Much Better," Gizmodo	10/29/2009	
2 Alon Eizenberg, "Upstream Innovation and Product Variety in the U.S. Home PC Market," January 2014		
3 Alphr: Acer: The Crapware Con (http://www.alphr.com/acer/6065/acer-the-crapware-con)	10/29/2009	
4 Alphr: Apple: The Crapware Con (http://www.alphr.com/features/352903/apple-the-crapware-con)	10/29/2009	
5 Alphr: Asus: The Crapware Con (http://www.alphr.com/features/352909/asus-the-crapware-con)	10/29/2009	
6 Alphr: Dell: The Crapware Con (http://www.alphr.com/features/352912/dell-the-crapware-con)	10/29/2009	
7 Alphr: HP: The Crapware Con (http://www.alphr.com/features/352918/hp-the-crapware-con)	10/29/2009	
8 Alphr: Lenovo: The Crapware Con (http://www.alphr.com/features/352906/lenovo-the-crapware-con)	10/29/2009	
9 Alphr: Samsung: The Crapware Con (http://www.alphr.com/features/352915/samsung-the-crapware-con)	10/29/2009	
10 Alphr: Sony: The Crapware Con (http://www.alphr.com/features/352921/sony-the-crapware-con)	10/29/2009	
11 Alphr: The Crapware Con (http://www.alphr.com/features/352927/the-crapware-con)	10/29/2009	
12 Alphr: The Verdict: The Crapware Con (http://www.alphr.com/features/352933/the-verdict-the-crapware-con)	10/29/2009	
13 Alphr: Toshiba: The Crapware Con (http://www.alphr.com/features/352924/toshiba-the-crapware-con)	10/29/2009	
14 AnandTech: Lenovo, SuperFish and Security (http://www.anandtech.com/show/8993/lenovo-superfish-and-security)	2/19/2015	
15 Apple: Configure – 13-inch MacBook Pro with Retina Display (http://www.apple.com/shop/buy-mac/macbook-pro?product=MF839LL/A&step=config#)	5/11/2016	
16 Ars Technica: "SSL hijacker" behind Superfish debacle imperils large number of users (http://arstechnica.com/security/2015/02/ssl-hijacker-behind-superfish-debacle-imperils-big-numberof-users/)	2/20/2015	

Document Description	Date	Bates Range
17 Ars Technica: Superfish Doubles Down, Says HTTPS-Busting Adware Poses No Security Risk (http://arstechnica.com/security/2015/02/superfish-doubles-down-says-https-busting-adware-poses-no-security-risk/)	2/20/2015	
18 Ars Technica: Two Weeks On, Superfish Debacle Still Causing Pain for Some Lenovo Customers (http://arstechnica.com/security/2015/03/two-weeks-on-superfish-debacle-still-causing-pain-for-some-lenovo-customers/)	3/6/2015	
19 AT&T Internet Service: Plans and Pricing (http://www.attinternetservice.com/plans.html)		
20 BBC: Lenovo Taken to Task Over 'Malicious' Adware (http://www.bbc.com/news/technology-31533028)	2/19/2015	
21 Beta News: Lenovo's Superfish Fiasco has Badly Damaged Consumer Trust (http://betanews.com/2015/02/23/lenovos-superfish-fiasco-has-badly-damaged-consumer-trust/)	2/23/2015	
22 Business Partnership Agreement between Lenovo PC HK Limited and Superfish, Inc.	6/17/2014	LEN-0094793 - LEN-0094812
23 Business Partnership Agreement between Lenovo PC HK Limited and Superfish, Inc.	6/17/2014	SF_MDL_010342 - SF_MDL_010361
24 Chris Nosko, "Competition and Quality Choice in the CPU Market," November 2010		
25 CNN Money: Lenovo Slipped 'Superfish' Malware Into Laptops (http://money.cnn.com/2015/02/19/technology/security/lenovo-superfish/)	2/19/2015	
26 Consolidated Class Action Complaint	11/12/2015	
27 Defendant Lenovo (United States), Inc.'s Response to Plaintiffs' First Set of Interrogatories	6/8/2016	
28 Dell: Inspiron 15 3000 Series Laptop (http://www.dell.com/us/business/p/inspiron-153558-laptop/pd?ref=PD_OC)	7/18/2016	
29 Email from Adi Pinhas to Feng Lee, Re: Back APP power	7/28/2014	SF_MDL_010985 - SF_MDL_011008
30 Email from Adi Pinhas to Feng Lee, Re: Data flow	2/24/2015	SF_MDL_013358 - SF_MDL_013358
31 Email from Adi Pinhas to Feng Lee, Re: Superfish and Lenovo RE: follow up on UX Review	4/21/2014	LEN-0043777 - LEN-0043779
32 Email from Adi Pinhas to Feng Lee, Re: The user experience walkthrough	5/1/2014	LEN-0043675 - LEN-0043679
33 Email from Adi Pinhas to Jessica Chen and Ronen Daniel, Re: Back APP power	7/24/2014	LEN-0055529 - LEN-0055539
34 Email from Dave Cree to Mark Cohen et al., Re: Update on Superfish	9/25/2014	LEN-0018418 - LEN-0018419
35 Email from Ed Grant to Ed Grant and Feng Lee, Re: Conversation with Ed Grant	9/23/2014	LEN-0050126 - LEN-0050126

	Document Description	Date	Bates Range
36	Email from Feng Lee to Adi Pinhas and Ronen Daniel, Re: Super Urgent - Customer Complain on Superfish	9/23/2014	LEN-0048830 - LEN-0048830
37	Email from Feng Lee to Adi Pinhas et al., Re: Opt Out Screen Change	2/25/2015	SF_MDL_013427 - SF_MDL_013428
38	Email from Feng Lee to Adi Pinhas, Re: Superfish and Lenovo RE: follow up on UX Review	4/20/2014	LEN-0048302 - LEN-0048304
39	Email from James Hoff to Ed Grant, Re: Preloaded Superfish Visual Discovery	9/24/2014	LEN-0018290 - LEN-0018294
40	Email from James Hoff to Ed Grant, Re: Preloaded Superfish Visual Discovery	9/24/2014	LEN-0013600 - LEN-0013604
41	Email from James Lacroix to Feng Lee et al., Re: Disable Superfish Service for Lenovo Boxes	2/9/2015	SF_MDL_006021 - SF_MDL_006027
42	Email from Jessica Chen to Adi Pinhas and Ronen Daniel, Re: Back APP power	7/23/2014	LEN-0039919 - LEN-0039930
43	Email from Jessica Chen to Ronen Daniel, Re: SF#01271398 - Z50-70 Superfish cause e-Banking website	1/14/2015	LEN-0068738 - LEN-0068750
44	Email from Jinqiang Wu to Feng Lee, Re: super fish	9/10/2014	LEN-0037424 - LEN-0037426
45	Email from Joshua Novak to Ed Grant and Wendy Han, Re: Highlight_McAfee cause IE cannot open web page	6/25/2014	LEN-0064650 - LEN-0064652
46	Email from Paul Plaskonos to Paul Plaskonos and Ed Grant, Re: Conversation with Paul Plaskonos	2/19/2015	LEN-0034956 - LEN-0034956
47	Email from Peter Gaucher to Jim Hung, Stacey Baer, and Dilip Bhatia, Re: Clarification & facts about "Adware Program preloaded in Yoga 2 Pro?"	11/6/2014	LEN-0018155 - LEN-0018159
48	Email from Ravit Weissman to Adi Pinhas, Re: Copyright Infringement UK	2/21/2015	SF_MDL_013035 - SF_MDL_013040
49	Email from Ronen Daniel to Adi Pinhas and Amir Di-nur, Re: Superfish Ask	2/23/2015	SF_MDL_013160 - SF_MDL_013172
50	Email from Ronen Daniel to Feng Lee and Jessica Chen, Re: User can not open IE when they use web bank on the machine with superfish	12/9/2014	LEN-0035573 - LEN-0035577
51	Excel Spreadsheet: Ship Qty by Plant, Ship Qty by Month, Sold to Ship Qty by Month		LEN-0114815
52	Expert Report of Dr. Aviel D. Rubin	7/22/2016	
53	Federal Trade Commission: Monitoring Software on Your PC: Spyware, Adware, and Other Software	4/19/2004	
54	Forbes: How Lenovo's Superfish 'Malware' Works And What You Can Do To Kill It (http://www.forbes.com/sites/thomasbrewster/2015/02/19/superfish-need-to-know/#6c5a392f5f20)	2/19/2015	

Document Description	Date	Bates Range
55 Forbes: Lenovo Only Made Up To $250,000 From Nightmare Superfish Deal, Say Sources (http://www.forbes.com/sites/thomasbrewster/2015/02/27/lenovo-got-very-little-from-superfish-deal/#5f489ed3f5ce)	2/27/2015	
56 Forbes: SuperFish: A History of Malware Complaints and International Surveillance (http://www.forbes.com/sites/thomasbrewster/2015/02/19/superfish-history-of-malware-and-surveillance/#749773355d7e)	2/19/2015	
57 Gigaom: One Positive from Superfish: Less Bloatware on Lenovo's New PCs (https://gigaom.com/2015/02/27/one-positive-from-superfish-less-bloatware-on-lenovos-new-pcs/)	2/27/2015	
58 Hemanta Saikia, Chayan Paul, and Dibyojyoti Bhattacharjee, "Comparing Performance of Some Brands of Laptop Computers with Special Reference to Booting Time," Assam University Journal of Science & Technology, Vol. 5, Number II, 2010		
59 HP 2014 Annual Report		
60 IDC Press Release: PC Leaders Continue Growth And Share Gains As Market Remains Slow, According to IDC (http://www.idc.com/getdoc.jsp?containerId=prUS25372415)	1/12/2015	
61 Image of Pop-up Window: Explore Shopping with VisualDiscovery		SF_MDL_000036 - SF_MDL_000036
62 InfoWorld: Lenovo: 'We were as surprised as you' (http://www.infoworld.com/article/2886959/laptop-computers/are-you-buying-risk-along-with-yourlaptop.html)	2/20/2015	
63 Intel Processor Pricing, Effective April 24, 2016 – Recommended Customer Price Tray Units		
64 J. Steckle, et al., "Is it Worth Anything? Using Surveys in Intellectual Property Cases," AIPLA White Paper, 2013		
65 Kirk P. Arnett and Mark B. Schmidt, "Busting the Ghost in the Machine," Communications of the ACM, August 2005, Vol. 48, No. 8		
66 Kirk P. Arnett and Mark B. Schmidt, "Spyware: A Little Knowledge is a Wonderful Thing," Communications of the ACH, August 2005, Vol. 48, No. 8		
67 Lee A. Freeman and Andrew Urbaczewski, "Why Do People Hate Spyware?," Communications of the ACM, August 2005, Vol. 48, No. 8		
68 Lenovo Forums: Potentially Unwanted Program - Superfish VisualDiscovery (https://forums.lenovo.com/t5/Security-Malware/Potentially-Unwanted-Program-Superfish-VisualDiscovery/td-p/1794457)	11/16/2014	
69 Lenovo Group Limited 2014/15 Annual Report		
70 Lenovo Statement on SuperFish		
71 Lenovo WindowShopper Installer Product Requirements Document, Version 1.0	4/11/2014	SF_MDL_000243 - SF_MDL_000244

72	Lenovo: Ideapad 510S | 14" Configurable Laptop (http://shop.lenovo.com/us/en/laptops/ideapad/500-series/510s-14-inch/)	7/20/2016	
73	Lenovo: Ideapad 710S | CuttingEdge Stylish Laptop (http://shop.lenovo.com/us/en/laptops/ideapad/700-series/710s)	7/20/2016	
74	Lenovo: Information on Free McAfee Subscription for Lenovo Customers with Superfish Preload (https://support.lenovo.com/us/en/mcafeesubscription)	7/20/2016	
75	Lenovo: Lenovo G5030 Laptop | EntryLevel Laptop with DVD Drive (http://shop.lenovo.com/us/en/laptops/lenovo/g-series/g50-30/#tab-tech_specs)	7/18/2016	
76	Lenovo: SuperFish Vulnerability (https://support.lenovo.com/us/en/product_security/superfish)	6/3/2016	
77	M. Jaeger and N.L. Clarke, "The Awareness and Perception of Spyware amongst Home PC Computer Users," Australian Information Warfare and Security Conference	12/4/2006	
78	M. Saqib and M. Papdaki, "Comparing Anti-Spyware Products – A Different Approach," Advances in Networks, Computing and Communications 6		
79	Martin Boldt, "Investigating Spyware in Peer-to-Peer Tools," ResearchGate, January 2003 (https://www.researchgate.net/publication/228759206)		
80	Merrill Warkentin, Robert Luo, and Gary Templeton, "A Framework for Spyware Assessment," ResearchGate, August 2005 (https://www.researchgate.net/publication/220423529)		
81	Microsoft News Center: Battling 'Spyware': Debate Intensifies on Controlling Deceptive Programs	4/20/2004	
82	Microsoft Store: Best Signature Edition PCs: Fastest, Safest Computers (http://www.microsoftstore.com/store/msusa/en_US/cat/Signature-Edition-Computers/categoryID.69916600)	5/11/2016	
83	Ming-Wei Wu et al., "Self-Healing Spyware: Detection, and Remediation," IEEE Transactions on Reliability, Vol. 56, No. 4, December 2007		
84	Minjae Song, "Measuring Consumer Welfare in the CPU Market: An Application of the Pure Characteristics Demand Model," September 2004		
85	Notebook Review: How To Improve Laptop Battery Life: Bloatware and Automatic Updates (http://www.notebookreview.com/howto/how-to-improve-laptop-battery-life/2/)	5/11/2016	
86	PEW Internet: Spyware – The Threat of Unwanted Software Programs is Changing the Way People Use the Internet	7/6/2005	
87	Pew Research Center: Americans' Attitudes About Privacy, Security and Surveillance (http://www.pewinternet.org/2015/05/20/americans-attitudes-about-privacy-security-and-surveillance/)	5/20/2015	

88	Robin S. Poston and Amy Harris, "Spyware: A View from the (Online) Street," ResearchGate (https://www.researchgate.net/publication/220422152)		
89	Roger Thompson, "Why Spyware Poses Multiple Threats to Security," Communications of the ACM, August 2005, Vol. 48, No. 8		
90	Sci-Tech Today: Lenovo PCs Ship with Nasty Malware, Putting User Data at Risk (http://www.sci-tech-today.com/story.xhtml?story_id=11000CA8NKRU#)	2/19/2015	
91	SecurityWeek: Feedback Friday: Lenovo Preinstalled Superfish Adware on Laptops – Reactions (http://www.securityweek.com/feedback-Friday-lenovo-preinstalled-superfish-adware-laptops-%E2%80%93-reactions)	2/19/2015	
92	Slate: You Had One Job, Lenovo (http://www.slate.com/articles/technology/bitwise/2015/02/lenovo_superfish_scandal_why_it_s_one_of_the_worst_consumer_computing_screw.html)	2/20/2015	
93	SpecOut: Acer ES1-511-C0DV Specs & Details (http://laptops.specout.com/l/5719/ES1-511-C0DV)	7/18/2016	
94	Srinivasan Ofek, "How Much Does the Market Value an Improvement in a Product Attribute," Marketing Science, INFORMS, Vol. 21, No. 4, Fall 2002		
95	Superfish Data Flow		SF_MDL_013359 - SF_MDL_013361
96	Superfish Presentation: Lenovo See-More, UX Walkthrough		LEN-0094734 - LEN-0094743
97	Superfish Update - An Open Letter from Lenovo CTO Peter Hortensius	2/23/2015	
98	TechnoBuffalo: Lenovo Responds to "SuperFish" Report, Says Malware is No Longer Active (http://www.technobuffalo.com/2015/02/19/lenovo-responds-to-superfish-report-says-malware-is-no-longer-active/)	2/19/2015	
99	The Globe and Mail: Controversial Startup Superfish Says It Will Use 'Visual Search' in New Business (http://www.theglobeandmail.com/report-on-business/small-business/sb-managing/controversial-startup-superfish-says-it-will-use-visual-search-in…)	5/29/2015	
100	The Guardian: Lenovo Demonstrates that Malware is Big Business (https://www.theguardian.com/technology/2015/feb/20/lenovo-malware-big-business-analysis-pc-superfish)	2/20/2015	
101	The New York Times: Lenovo and Superfish Penetrate the Heart of a Computer's Security (http://bits.blogs.nytimes.com/2015/02/22/lenovo-and-superfish-penetrate-the-heart-of-a-computers-security/)	2/22/2015	
102	Thomas F. Stafford, "Spyware: The Ghost in the Machine," Communications of the Association for Information Systems, Vol. 14, 2004		
103	Tom's Guide: Lenovo's Security-Killing Adware: How to Get Rid of It (http://www.tomsguide.com/us/lenovo-superfish-adware-removal-news-20470.html)	6/8/2016	

Document Description	Date	Bates Range
104 TripWire: Lenovo Customers File ClassAction Lawsuit Over Superfish Adware (http://www.tripwire.com/state-of-security/latest-security-news/lenovo-customers-file-class-action-lawsuit-over-superfish-adware/)	2/23/2015	
105 US-CERT: Lenovo Superfish Adware Vulnerable to HTTPS Spoofing (https://www.us-cert.gov/ncas/alerts/TA15-051A)	2/24/2015	
106 Usenix Technical Paper: Gatekeeper: Monitoring Auto-Start Extensibility Points (ASEPs) for Spyware Management (https://www.usenix.org/legacy/event/lisa04/tech/full_papers/wang/wang_html/)	5/11/2016	
107 Web Archive: Acer | Aspire E | Aspire ES1511C0DV | Overview (https://web.archive.org/web/20140820205144/http://us.acer.com/ac/en/US/content/model/NX.MMLAA.006)	8/20/2014	
108 Web Archive: Inspiron and XPS Laptops, Ultrabooks & Notebook Computers for Sale | Dell (https://web.archive.org/web/20140921000627/http://www.dell.com/us/p/laptops.aspx?~ck=mn)	9/21/2014	
109 Web Archive: Lenovo G Series: Affordable Everyday Laptops | Lenovo US (https://web.archive.org/web/20140927072455/http://shop.lenovo.com/us/en/laptops/lenovo/g-series)	9/27/2014	
110 Web Archive: Microsoft Signature (http://web.archive.org/web/20120604192858/http:/signature.microsoft.com/under-the-hood.aspx)	6/4/2012	
111 Wired: Lenovo's Response to Its Dangerous Adware is Astonishingly Clueless (http://www.wired.com/2015/02/lenovo-superfish/)	2/19/2015	
112 Xfinity: Xfinity Bundles (http://www.xfinity.com/shop/xfinity-internetplus-west-alt?CMP=KNC-IQ_ID_sIW8gmqly-VQ2-g-VQ6-61119114216-VQ16-c-pkw-comcastinternet-pmt-e-slid--tid-17589rb155979)		
113 ZDNet: How to Fully De-Gunk a PC of Crapware (http://www.zdnet.com/article/how-to-fully-degunk-a-pc-of-crapware/)	6/18/2007	